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ABSTRACT

A study examined postsecondary occupational education delivery from two standpoints: (1) the workings of and main participants in instructional decision-making processes and (2) student motivation in selecting occupational programs and institutions. Site visits were conducted at 48 institutions, and another 384 institutions participated through a mail survey. Over 6,000 administrators, placement officials, departmental chairpersons, faculty, and students responded. It was found that competency-based education has improved occupational instruction in several important ways, including increased emphasis on job placement after graduation and better accommodation of special needs students. Although employers were involved in many aspects of curriculum and instruction, their degree of involvement was not as great as vocational-technical educators would like to see. Data from all three types of institutions studied indicated a need for more-formalized and better-structured professional development activities. (Appendixes include 142 statistical tables, data on the universe of public and independent institutions offering postsecondary occupational education, the mail survey questionnaire, item nonresponse tables, and the site visit interview and classroom observation forms. (Twelve pages of references are provided.) (MN)

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POSTSECONDARY OCCUPATIONAL
EDUCATION DELIVERY:
AN EXAMINATION

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Final Report

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FOREWORD

Postsecondary and adult occupational education caters to a large and growing clientele. To gain an understanding of the key issues affecting postsecondary occupational education in order to provide informed analyses to policymakers and educators, the National Center for Research in Vocational Education has undertaken a significant data collection project. Forty-eight institutions opened their campuses to project staff for on-site data collection and another 384 institutions participated through a mail survey. Over 6,000 administrators, placement officials, departmental chairpersons, faculty, and students responded. The two concerns guiding this study were (1) how curriculum and instructional decisionmaking processes occur and who are the participants in these processes, and (2) student motivation in selecting occupational programs and institutions. This report concludes the second year of this project; the first project year was used to design the study. Both phases of the project, design and data collection, were funded by the Office of Vocational and Adult Education of the U.S. Department of Education. Their support is gratefully acknowledged.

Numerous institutions opened their campuses for site visits or participated in this study through a mail survey. We would like to recognize and thank the administrators at the forty-eight case study sites, their faculty and staff, and the institutional liaison for their gracious assistance in allowing project staff access and in scheduling visits to their campuses and classrooms. For those institutions participating in the mail survey, we acknowledge their contribution and assistance in distributing, collecting, and returning surveys. We are indebted to the administrators, placement officials, chairpersons, faculty, and students that took the time to complete survey instruments.

Several individuals provided input into the final report. We would like to thank:

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- Mr. Bernard Ferreri, Associate Vice Chancellor, City Colleges of Chicago System
- Dr. Richard Willke, American Medical Association, Center for Health Policy and Research, Chicago, Illinois

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Ray D. Ryan
Executive Director
The National Center for Research
in Vocational Education

EXECUTIVE SUMMARY

One of the few points of consensus in the current debate over the quality of education in the United States is that fundamental changes must be made in the educational process if our nation is to maintain its leadership role in the areas of research, commerce, industry, and defense. Although numerous individuals, governmental bodies, and other organizations have identified an array of symptoms and cures in their publications, the fact remains that there is a scarcity of empirical data available to support many of these views. In an effort to contribute to the national debate in a constructive way, the National Center for Research in Vocational Education has conducted an extensive data collection project focused on postsecondary occupational education delivery. The project comprised a two-year study designed and conducted to yield a nationally representative survey of and multiple case studies of public and nonprofit postsecondary institutions offering occupational education.

This document represents the final report of the project. It is organized into 11 separate chapters, in which individuals involved in the project have considered various issues in postsecondary occupational education. Following the chapters are Appendices A through E, which present the following:

- Appendix A--Complete Statistical Tables
- Appendix B--Universe Listing of Postsecondary Occupational Education Institutions
- Appendix C--Mail Survey Instruments
- Appendix D--Item Nonresponse Data
- Appendix E--On-Site Visit Interview Forms

All aspects of the survey design from the definition of the units of analyses and observation to sample selection are documented in Chapter 2. The survey sampled about 730 institutions, representing over 30 percent of all public and nonprofit institutions in the United States that offer postsecondary occupational education. Responses were solicited from as many as 20 different individuals in each institution, including specifically administrators, placement directors, chairpersons, instructors, and students. Over 6,000 responses were received and used in analyses. In addition to the survey, project staff spent 3-5 days visiting 48 institutions located in 38 different states to interview administrators, instructors, students, and employers and to observe classroom instruction. An extensive amount of qualitative data was derived from these on site visitations.

Chapter 3 tests empirically a model of instructional delivery that examines the joint influences of personal, institutional, and extra-institutional factors. Alfred and Hummel, the authors, use correlation analyses to examine the net direction of influence of extra-institutional factors such as community characteristics, institutional factors such as enrollment and operating budget, student characteristics, and governance on perceptions of the educational process, instruction, and institutional involvement.

Competency-based education (CBE) has been identified by some of its proponents as the most significant development in postsecondary occupational education since the Smith-Hughes Act of 1917. The theoretical basis for CBE has been well developed, and reports of successful programs are documented in the literature. However, misgivings about CBE have also been reported. In Chapter 4, Belcher compares the responses of chairpersons from competency-based programs with those from traditional programs, representing the first nationally valid survey of some of the primary features of CBE. The results seem to indicate that CBE has improved occupational instruction in several important ways, for example in the accommodation of special needs students, in increased emphasis on placement in employment upon completion of a program, and in developing students' basic skills. However, evidence is presented also to suggest that competency-based programs have not kept up with traditional programs in maintaining up-to-date equipment and facilities.

In Chapter 5, Dean explores and compares the degree of influence that instructors, administrators, local boards of trustees, and state agencies have on selected administrative, academic, and financial matters in occupational programs. Perceptions of local administrators in the various decision-making areas were compared and correlated with institutional type. Among Dean's findings were the following: First according to the perceptions of the responding administrators in the sample, state agencies were not highly involved in most decisions. Second, the administrators perceived themselves to have the highest degree of decision-making involvement in all matters by a wide margin when compared to instructors, local boards, and state agencies. Third, Dean found a pattern that shows vocational-technical institutions to be significantly different from community colleges and four-year institutions in terms of how influential instructors are in decision making. Fourth and last, local boards of trustees tend to have more influence in occupational program decision making in community colleges and vocational-technical institutions than in four-year institutions.

Chapter 6 reports on an investigation of the role of the institutional placement office in postsecondary occupational education institutions. Rider finds that great variation exists in the operational context of the placement function when different institutional types are compared. Some institutions had no placement office or any staff fulfilling that function; others were thoroughly involved in placement. Rider finds that in matters involving curriculum, the most active involvement on the part of the placement office is at vocational-technical institutions. One hypothesis of the study was that institutions performed considerable follow-up contacts with employers concerning students that had been placed. Such contacts were found to occur, particularly for program completers, but were rarely systematic.

Chapter 7 addresses the question of whether the perceived importance of involving employers in curriculum and instruction is acted upon by educators, or whether it is mainly a matter of conventional wisdom. Warmbrod, the author, finds that employers are involved in many aspects of curriculum and instruction and they are perceived as having influence. However, it is also clear that this involvement is not as widespread or influential as most vocational-technical educators would like to see. Warmbrod recommends that the practice of following up on employer satisfaction with graduates should be increased. Systematic follow-up with employers has the potential for continual program improvement, increased placement opportunities, and closer relationships with and support from employers.

In Chapter 8, Dean presents a framework for and reports on the degree of influence upon curriculum and instructional decision making of selected persons and groups. Findings reveal substantial overlap of administrators' and chairpersons' perceptions about the degree of influence of various parties on curriculum and instruction; nevertheless, some perceptual differences were noted. For example, differences appeared in the area of the relative importance attached to training-related placement and preparing students for further education goals at the various institutional types studied.

In Chapter 9, Rider considers the issue of faculty inservice training. An examination of the responses from all three institutional types suggests the need to direct greater efforts toward a formalized and well-structured professional development program for faculty. The author expresses special concern about the finding that almost a third of the postsecondary occupational education faculty reported spending zero hours per week obtaining additional professional training. Another 54 percent reported spending only one to four hours per week in that activity. The recommendation is made for institutions among all three types studied to devote more of their resources to professional inservice training and development.

Chapter 10 examines the characteristics of the 3,330 students who responded to the survey. In the first part of the chapter, Willke presents an analysis of the demographic, socioeconomic, and educational characteristics of the sample. The second part relates the current educational variables to many of the characteristics of the students. What emerges from Willke's paper is a detailed summary of student characteristics that provides insights into the behavior and motivating factors influencing students' choices in postsecondary occupational education.

Chapter 11, by Ferreri, examines some of the popular stereotypes that influence the public debate over educational excellence and discusses institutional and administrative responses to the excellence movement. He concludes that excellence in postsecondary occupational education cannot be achieved by pronouncements, politics, or postulates. Instead, excellence needs to be cultivated, challenged, and celebrated.

CHAPTER 1

INTRODUCTION

Kevin Hollenbeck

Has the tide of mediocrity so vividly depicted by the National Commission on Excellence in Education (1983) overtaken postsecondary education as well as grades K-12? Is the postsecondary education of the middle two quartiles of the population, the "neglected majority" (Parnell 1985), being overlooked in the general clamor for reform? Is the recent reversal of enrollment trends a market signal that 1- and 2-year postsecondary institutions, a relative newcomer to the general educational setting, are not meeting the needs of students? Or do the significant inflows of reverse transfers, older adults, and disadvantaged individuals into postsecondary occupational education imply that institutions offering postsecondary and adult education are serving as efficient channels into the labor force?

Without rigorous, systematic data, these questions will go unanswered and debate surrounding these issues will be supported by opinions and anecdotal evidence, at best. But the stakes are too high. Faced with international economic competition, accelerating technological change, dramatic population and demographic shifts, and limited resources, educational policy makers and administrators need to know now what postsecondary and adult programs and instructional techniques best meet the needs of which segments of the population and how effective institutions are in their curriculum decision making and instructional delivery.

To meet this need, the National Center for Research in Vocational Education has undertaken an extensive data collection effort focused on postsecondary occupational education delivery. Over the past 2 years, this study has designed and conducted a nationally representative survey and multiple case studies of public and nonprofit postsecondary institutions offering occupational education.

This document reports on the results of analyses of the data that were collected. It is organized into 11 separate chapters, in which the authors have considered different issues concerning postsecondary occupational education, plus appendices. The analyses reported here do not, by far, exhaust the important and relevant issues that could be examined with the massive amount of data that was collected. So the document, despite being the grant's final report, should be considered as a first step in trying to grapple with these issues. To take the next step, the authors have plans to pursue additional analyses, but also have prepared the data in a fashion that will allow it to be made available to the research community at large.

The methodological aspects of the survey and case studies are presented in chapter 2. All aspects of the survey design from the definition of the units of analyses and observation to sample selection are documented. About 730 institutions, representing over 30 percent of all U.S. institutions offering postsecondary occupational education (publicly), were sampled. At each institution, responses were solicited from up to 20 different individuals--administrators, placement directors, chairpersons, instructors, and students. The response rate for the survey was approximately 60 percent. In chapter 2, an exhaustive response analysis is also reported that shows that colleges and universities are slightly underrepresented among respondents and that institutions in the Northeast part of the country are also underrepresented relative to the rest of the country. The chapter documents the procedures that were used to select and conduct the institutional case studies, whose purpose was to examine more closely the institutional contexts and operations in order to inform the survey data analyses. Thus, 48 institutions, a geographically dispersed subsample of the overall sample, were chosen for the case studies and project staff spent up to 5 days at each site interviewing key informants and observing classroom instruction.

In chapter 3, Alfred and Hummel use the richness of the data set to test empirically a model of instructional delivery that examines the joint influences of personal, institutional, and extra-institutional factors on curriculum and instruction. Because of different, and often conflicting attitudes, goals, and expectations, different actors in the postsecondary setting pull and tug on curricula and instructional decisions in different directions. For example, faculty members holding values of "selectivity" and "academic scholarship" may conflict with administrators holding values of "pragmatism" and "adaptation." Using correlation analyses, the authors examine the net direction of influence of extra-institutional factors such as community characteristics, institutional factors such as enrollment and operating budget, student characteristics, and governance on perceptions of the educational process, instruction, and institutional involvement.

Claims have been made that the emergence of competency-based education (CBE) has been the most significant development in postsecondary occupational education since the Smith-Hughes Act of 1917. The premise behind CBE is that requiring a class of students, who likely exhibit a wide range of aptitudes and work habits, to learn at the same rate over a fixed period of time is wasteful; but if duration of learning time becomes a variable and students are allowed to progress at a rate of learning determined by their own abilities, then the instructional process becomes much more efficient. Despite claims and assurances from the proponents of competency-based education, there has been no national assessment of the results of CBE. Belcher's study in chapter 4 represents the first nationally valid survey of some of the primary features of CBE. The results seem to indicate that CBE has improved occupational instruction in several important ways, for example in the accommodation of special needs students, in increased emphasis on placement in employment upon completion of a program, and in developing students' basic skills. However, evidence is presented that competency-based programs have not kept up with traditional programs in maintaining up-to-date equipment and facilities and that the educational process may be hampered somewhat by conflicting perceptions and goals of instructors and school administrators.

Dean examines institutional decision making in Chapter 5. As opposed to the Alfred and Hummel model that focuses solely on instruction, this chapter looks at administrative, personnel, and financial matters. Using data reported by administrators, Dean analyzes the perceptions of key actors in various types of decisions. The results show that administrators report a minimum of state administrative agency intrusion into local matters. State agencies do get somewhat involved in budget matters and in setting the institutional mission, but have little involvement in other decisions. The instructional staffs of these institutions have high involvement in grading standards, professional development activities, and facility and equipment decisions, whereas boards of trustees get involved only in decisions concerning institutional mission, budget matters, and facilities and equipment.

The role of the institutional placement office is considered by Rider in chapter 6. Great variation in the operational context of the placement function was observed across institutions. Some institutions had no placement office or staff fulfilling that function at all. Others had a quite organized and active placement function and involved placement officials in curriculum and instructional decision making on a regular basis. Further evaluation of the data by institution type indicated that placement official involvement in curricular matters occurs most frequently at vocational-technical institutions. An hypothesis of the study was that institutions performed considerable follow-up contacts with employers concerning students that had been placed. Such contacts were found to occur, particularly for program completers, but they were rarely systematic.

Warmbrod analyzes employer involvement in curriculum decision making and other matters in chapter 7. Most educators and private sector actors believe that mutual benefits can be derived from linkages between business-industry-labor (B-I-L) and postsecondary occupational education. At that level, the primary linkages take the form of advisory committees, customized training, cooperative education experience, donations of facilities and equipment, and follow-up of students that have been placed. The chapter's background section suggests that the promise of advisory committees has never been quite delivered. The analyses of the survey data show that a large majority of programs have advisory committees and these committees are particularly influential in suggesting curriculum changes caused by technological advances. However, several indicators suggest that advisory committees are, indeed, not as active or influential as they might be. Furthermore, the survey respondents reported relatively slight involvement in developing cooperative education training sites or donations of equipment/supplies. Finally, follow-up with employers occurred with some frequency in vocational-technical institutes only. It should be noted that the data upon which this study is based represents the educational side of the B-I-L linkage only. Warmbrod concludes that the private sector individuals need to be consulted also.

The objectives of Dean's study of decision making in chapter 8 are to present a theoretical framework and to report the degree of influence of groups and individuals, institutional and program goals, and resources on curriculum and instruction. Findings reveal substantial overlap of administrators' and chairpersons' perceptions about the degree of influence of these factors; however, some perceptual differences did arise. Of significance is the fact that instructional staff seemed to have the most control of curricula and instructional methods. Across the three types of institutions, general agreement was found for the importance of the institutional goals of developing basic (academic) skills and general problem solving and critical thinking goals. Divergence appeared between institutional types on the importance of training-related placement and preparing students for further education as institutional goals.

In chapter 9, Rider considers the issue of faculty inservice training. Administrators are well aware of the fact that the most critical resource at any postsecondary institution is its (full- and part-time) faculty. With expanding enrollments and relatively young faculty, 2-year community and junior colleges and technical institutes did not need to be overly concerned with individual training in the 60's and early 70's. However, the rapid growth ended, the faculty aged, and staff development became a key issue. Analysis of the survey data shows that professional development budgets of occupational programs are quite modest, nonetheless. They average about $3,000 per year. Furthermore, faculty average only 1.88 hours/week undertaking research in their area, 4.50 hours/week reading in their subject area, 1.95 hours/week reading other relevant materials, and 2.23 hours/week obtaining additional professional training. In short, postsecondary occupational education institutions exhibit wide variation in their emphasis on professional inservice development. Many institutions need to devote more resources to it.

In chapter 10, Willke analyzes the student data that were collected. This analysis has two principal parts. The first part examines (1) the demographic and socioeconomic characteristics of the sample, (2) the educational characteristics--both background and current, and (3) current employment, military service, and government-provided training experiences so as to establish comparability with national norms. The second part relates the students' current educational activities to their demographic, socioeconomic, educational background, and employment characteristics in order to give insights into behavior and motivation.

The last chapter examines the response of postsecondary occupational education institutions to the general public dissatisfaction with schools and the concurrent calls for reform. Ferreri argues that the excellence that is being fostered on education is too narrow in focus. Curriculum and procedural reforms are needed, but strong emphasis needs to be placed on postsecondary occupational education and comprehensive programs geared at the middle quartile of the distribution in addition to the strengthening of baccalaureate and graduate programs.

The appendices presents exhaustive tabular analysis of the data so that readers who wish to consider subjects not directly analyzed in the text, but covered in the survey, can find quantitative evidence of interest. They also present the data collection instrumentation.

CHAPTER 2

DATA COLLECTION PROCEDURES AND RESPONSE

Kevin Hollenbeck

This paper documents the procedures followed in conducting the data collection effort that produced the information upon which the papers in this report are based. Two modes of data collection were undertaken--a nationally representative mail survey of institutions and on-site visitations to a geographically dispersed sample of institutions. Each will be addressed in turn.

Mail Survey

Because of the wide variety of institutional configurations that offer programs that could be classified as occupational education, a precise definition of the universe of interest had to be developed. The rules that were implemented for defining the population of interest are provided in exhibit 2-1. These definitional rules were selected for many reasons.

First of all, for logistical reasons, it was decided to include only institutions in the 50 states and the District of Columbia. Second, proprietary institutions were excluded for three reasons. In the main, the goal was to generate analyses and data that would inform policymakers and administrators. Relative to public or independent institutions, proprietary schools tend to operate within less regulated environments and offer fewer intervening mechanisms for control. Second, proprietary institutions and, in particular, their program offerings, are less stable in nature and were deemed to be too much of a "moving target" for a deliberative, rigorously designed data collection effort. Third, the sheer numbers of institutions--perhaps three times as many proprietary institutions as public and independent

EXHIBIT 2-1

RULES FOR INCLUDING AN INSTITUTION IN THE UNIVERSE TO BE ANALYZED

---

1. In United States

2. Public or Nonprofit

3. Offers Associate degree or Vocational Certificate in applied field representing 1 or more but less than 4 years of work beyond grade 12 or equivalent

4. Exclude institutions that offer only specialized programs in the following areas:

   -- Beauty/Barber/Cosmetology
   -- Real estate/Banking/Finance
   -- Flight/Aviation
   -- Travel agent
   -- Bible/Religion
   -- Fine arts
   -- Nursing/Medical technician
   -- Miscellaneous (e.g., Boat building, Dog grooming, etc.)

5. Exclude institutions whose missions are not primarily education, such as the following:

   -- Community based organizations
   -- Apprenticeship programs
   -- Job Corps centers
   -- Vocational rehabilitation programs
   -- Penal institutions

---

schools--would have expanded the study to unmanageable proportions.[1]

The third condition used to define the universe was that the institutions offer a course of study of at least 6 months in length in an occupational field leading to a vocational certificate or associate degree. In theory, this condition meant that in the intent of the student, the course of study was not being pursued for the purpose of transferring to a baccalaureate or higher degree. This was meant to screen out institutions that exclusively offer noncredit-bearing continuing education programs, adult basic education (ABE) programs, short-term customized or basic skill training programs, avocational or hobby programs, general (liberal arts) associate degree, baccalaureate, or higher degree-granting programs.

The fourth condition involved the exclusion of institutions that offered programs in only certain specialized fields, that is, cosmetology, real estate/finance, religion, nursing/medical technician, fine arts, travel agents, flight/aviation, and so forth. The rationale for these exclusions was that the missions of these institutions are organized around a single program, and the organizational decision making and student choice behavior is quite distinct from educational agencies offering multiple programs.

Along similar lines, the decision was made to exclude certain training deliverers whose primary missions were not educational in nature--community based organizations, apprenticeship programs, Job Corps centers, vocational rehabilitation agencies, and penal institutional programs. Although it is doubtless that relevant vocational education, some of which is postsecondary in nature, is offered by these types of institutions, it was decided that they were sufficiently distinct in their primary missions as to confound the resulting data analyses.

In general, all campuses from institutions having multiple campuses were included--as long as those campuses offered occupational programs and had a local administrator/director. As explained below, in constructing the universe listing, some reliance was placed on judgments by state or institutional officials, so the universe listing of institutions may not be totally consistent in its treatment of multiple campus institutions.

---

[1] Proprietary institutions do offer an alternative choice for students seeking occupational training and are a significant sector in the total education and training enterprise. As such, proprietary institutions probably warrant a similar data collection and analysis effort.

Universe Listing

Having determined the types of institutions to include in the universe, the next process that was undertaken was to list that universe. This was not an easy task and it required three data sources. One source of data was a public use tape from the U.S. Department of Education (Center for Statistics 1986) that provided information on 16,008 postsecondary institutions in the 50 States and the District of Columbia. Using the institutionally self-reported data provided on the tape for each of these schools, 3,583 were found that fit all of the following criteria:

- Provides instruction primarily for persons who completed or left high school
- Offers occupational instruction
- Offers degree, diploma, or certificate program of less than 2 years beyond grade 12 or degree, diploma, or certificate program of at least 2 but less than 4 years of work beyond grade 12
- Is public or nonprofit private

Using the second source of data, the document 1982 Postsecondary Schools with Occupational Programs (National Center for Educational Statistics 1982), 2,147 public or independent institutions were identified as one of the following school types:

- Vocational/technical
- Technical institute
- Junior/community college
- College[2]

Between the two lists, there was a significant number of discrepancies; institutions were listed on the tape but not in the directory and vice versa. To reconcile the lists, project staff contacted state agency personnel in all 51 states or jurisdictions to determine whether the discrepant institution was still existent, offered occupational education as we defined it, was not proprietary, and so forth. The resulting list of 2,299 institutions comprise appendix B to this document. The institutions in the list were included either because (1) they were on the computer tape and in the 1982 NCES document, or (2) an official in the state or at the institution indicated that the institution fit the universe rules. Note that the universe of institutions is constantly changing so the prepared list may exclude some institutions or erroneously include others. Furthermore, by relying on state or institutional officials' judgments, the list is somewhat arbitrary. In particular, some states felt that adult education centers or vocational-technical schools offering adult education occupational programs should not be included in the universe. Thus there may be a bias in the universe toward the exclusion of vo-tech institutes. Nevertheless, it is submitted that the universe listing in the appendix reflects as complete a list as could be developed at the time.

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[2] Types of schools excluded were Business/commercial, Cosmetology/barber, Flight, Trade, Arts/design, Hospital school, Allied health school, and Other.

Sampling Plan

Sample size was determined by simple random sampling for proportions, for example, the proportion of institutions in which the placement office provides input on curriculum decisions, or the proportion of institutions with formal assessment mechanisms in place for all incoming students. Call P, the population or true proportion, and p the sample proportion. The standard error of p can be represented as follows:

$$(1) \quad se(p) = \left[(1-fpc)\frac{p(1-p)}{n-1}\right]^{1/2}$$

where

se(p) = standard error of p
fpc = finite population correction = n/N
n = sample size
N = population size.

To achieve $(1 - \delta)$ percent statistical reliability (in a two-tailed test)[3] that the true proportion is within a ±d range of the sample proportion ($p-d \leq P \leq p+d$) the required completed sample size depends on N, δ, d, and P. For example, if $d=.05$ and $\delta=.05$, then the necessary sample size depends on N and P as follows:

	P		
N	.50	.70	.90
200	134	126	84
500	222	200	111
1000	286	251	125
2000	334	287	133
2200	340	292	134

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[3] $(1 - \delta/2)$ percent validity on a one-tailed test.

This table indicates that since the total population of institutions in the universe numbers around 2,300, if the true proportion of interest is .50, then a random sample of 340 will produce a sample proportion of between .45 and .55, 95 times out of 100. If a larger range of error were acceptable, say d=.10, then the necessary sample size to produce a sample proportion between .40 and .60 would be 95 instead of 340. On the other hand, if a smaller range of error was desirable, say ±.03, the sample size should be 738.

The error range of .05 was judged to be most reasonable, and the proposed completed sample size target was set at 340. With an assumed response rate of .50, this required a sample of 680, or a sampling rate of about .30. A total of 725 institutions were actually sampled by the procedures described below; they are identified on the list of institutions in appendix B.

Procedures

As documented in Hollenbeck and Dean (1987), the survey requested data from up to 20 respondents at each institution. First, the chief executive officer of the institution was asked a number of questions that related to the community and institution, the kinds of students that attended the institution, and influences on curriculum and instruction. Second, the person in charge of placement was surveyed about the kinds of career guidance and placement assistance offered to students and about business interactions. Third, two programs/departments were chosen randomly and their chairpersons were surveyed about their roles in and perceptions of the curriculum decisionmaking process. Fourth, a total of four instructors, two from each of the two programs, were randomly chosen and asked about the courses they teach, facilities, instructional delivery, and their perceptions of students and colleagues. Finally, three students being taught by each of the four instructors were randomly selected--12 students altogether. The students were queried about their prior educational and work experiences, their educational and occupational goals, and motivational factors.

Selection of Institutions and Programs. In order to achieve a random selection of occupational programs and to control the selection process, our strategy was to telephone all sampled institutions and request a catalog or course offering brochure. Recognizing that we may have difficulty retrieving such documents in some cases and that some institutions may, in fact, not belong to the population of interest, a primary sample was drawn with probability equal to .30 and a supplemental 8 percent random sample was obtained to use as replacements for those institutions in the primary sample that were deemed inappropriate sample members or that did/could not supply a catalog. The primary sample was comprised of 725 institutions; the supplemental sample size was 186. We ultimately used 99 of the 186 to complete the sample.[4] The state-by-state distribution of the final sample is given in exhibit 2-2. That exhibit also categorizes the sample by type of institution using the following categories:

- Community or Junior Colleges
- Technical Institutes
- Colleges or Universities and Branch Affiliates.

Community or Junior Colleges were defined as 2-year institutions that offer associate degree programs and that have (or had) a substantial transfer mission. Technical Institutes had technical/occupational education as their primary or organizing mission and offered applied associate degrees or vocational certificates. The type of institution predominating in this category was vocational-technical institutes that offer occupational and adult education programs. Colleges or universities and affiliates offered baccalaureate and higher degrees as their main emphasis, but typically had a small number of occupational programs that award an associate degree or vocational certificate. This category included branch campuses that may offer only 2-year programs.

Project staff perused the course offerings from the catalogs of the 725 institutions and selected three occupational programs randomly. The first two were the programs about which we were going to attempt to solicit information. The third was an alternative choice in case the institution had ceased offering either of the two primary programs selected.[5,6] A wide variety of programs were selected as might be expected. The exact distribution of programs for the entire sample is provided below in the discussion of response analysis.

After selecting institutions and programs, the next steps were to solicit participation in the study and to select faculty to be included in the survey.

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[4] That is 99 institutions of the primary sample either did not respond to our request for a catalog or did not offer postsecondary occupational programs as we defined them.

[5] If an institution offered three or fewer occupational programs, then all programs were selected with certainty.

[6] The two primary programs selected were ultimately used in approximately 98 percent of the responses. Thus we can conclude that the program selection process was adequately controlled.

EXHIBIT 2-2

SUMMARY DATA ABOUT POSTSECONDARY SAMPLE BY STATE

State	Institution Type			Total Sample
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Alabama	10 (7.4)	8 (7.4)	3 (2.2)	21
Alaska	6 (3.4)	0 (0.3)	0 (0.6)	6
Arizona	8 (6.8)	0 (0)	0 (0)	8
Arkansas	5 (3.7)	7 (7.4)	3 (3.4)	15
California	43 (37.5)	1 (0.9)	3 (3.7)	47
Colorado	5 (5.0)	2 (2.5)	3 (1.6)	10
Connecticut	3 (5.3)	4 (5.3)	2 (2.8)	9
Delaware	2 (0.9)	2 (0.3)	1 (0.6)	5
District of Columbia	0 (0)	1 (0.6)	0 (0.6)	1
Florida	14 (9.9)	13 (11.2)	4 (4.3)	31
Georgia	12 (7.7)	8 (9.0)	6 (4.3)	26
Hawaii	4 (2.2)	0 (0)	2 (1.2)	6
Idaho	0 (0.9)	1 (0.3)	1 (0.9)	2
Illinois	20 (17.0)	1 (1.6)	3 (2.5)	24
Indiana	9 (5.9)	1 (0.6)	10 (8.7)	20
Iowa	9 (8.4)	0 (0)	2 (0.9)	11
Kansas	11 (7.4)	5 (4.3)	5 (4.0)	21
Kentucky	3 (4.3)	9 (8.4)	2 (5.0)	14

EXHIBIT 2-2--Continued

State	Institution Type			Total Sample
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Louisiana	0 (2.2)	13 (16.4)	6 (4.7)	19
Maine	1 (0.9)	0 (1.6)	0 (2.8)	1
Maryland	8 (5.9)	1 (0.3)	1 (0.9)	10
Massachusetts	11 (10.5)	6 (7.8)	4 (3.4)	21
Michigan	15 (12.4)	3 (3.1)	7 (8.7)	25
Minnesota	7 (6.8)	15 (14.0)	2 (2.2)	24
Missouri	2 (5.0)	17 (12.1)	6 (6.2)	25
Mississippi	5 (8.7)	0 (0)	0 (0.9)	5
Montana	1 (2.2)	2 (1.6)	2 (1.2)	5
Nebraska	3 (4.3)	0 (0.3)	1 (2.5)	4
Nevada	3 (1.2)	0 (0)	0 (0.6)	3
New Hampshire	3 (2.2)	1 (0.6)	7 (5.3)	11
New Jersey	9 (6.8)	6 (7.1)	6 (2.8)	21
New Mexico	1 (1.6)	1 (2.2)	0 (3.4)	2
New York	22 (18.0)	2 (0.6)	9 (9.3)	33
North Carolina	20 (20.2)	1 (0.3)	1 (3.1)	22
North Dakota	4 (1.9)	0 (0)	1 (1.9)	5
Ohio	10 (8.4)	5 (8.7)	12 (11.8)	27

EXHIBIT 2-2--Continued

State	Institution Type			Total Sample
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Oklahoma	6 (3.7)	9 (11.5)	0 (2.5)	15
Oregon	6 (4.0)	0 (0)	1 (0.9)	7
Pennsylvania	9 (8.4)	19 (16.7)	17 (16.4)	45
Rhode Island	0 (0.6)	0 (0)	2 (2.8)	2
South Carolina	7 (7.1)	0 (2.2)	2 (2.5)	9
South Dakota	0 (0.6)	3 (3.1)	2 (3.4)	5
Tennessee	5 (4.0)	9 (13.0)	5 (4.7)	19
Texas	22 (21.7)	1 (0.9)	5 (4.7)	28
Utah	2 (2.2)	2 (1.9)	2 (2.2)	6
Vermont	2 (1.2)	0 (0)	1 (1.6)	3
Virginia	8 (9.3)	1 (6.2)	2 (2.2)	11
Washington	11 (8.7)	1 (1.6)	1 (0.6)	13
West Virginia	2 (2.2)	5 (6.8)	3 (4.3)	10
Wisconsin	7 (7.4)	1 (2.2)	1 (1.9)	9
Wyoming	2 (2.2)	1 (0.6)	0 (0)	3
TOTAL	377	188	159	725

NOTE: Number in parentheses is expected size of sample.

Selection of Faculty and Students. After achieving the final selection of institutions and programs, we wrote to the chief executive officer (CEO) of the institutions to request their cooperation in the study. The letter that was sent explained the purpose of the study, listed the organizations that endorsed the study, and indicated that faculty and students would be remunerated for their responses. Each CEO was asked to name a liaison for the institution with whom we would interact to distribute and collect the survey questionnaires, and the CEO was asked to complete a form that requested a listing of all (full-time and part-time) instructors in the two program areas that had been selected for the institution.

After receiving a response from the CEO or his/her designee, project staff randomly selected two instructors from each of the two program areas. (While the expectation was to select a total of 4 instructors from each institution, anywhere from 1 to 4 instructors may have been selected because some institutions may have only had a single occupational program and some programs may have only had one instructor.) Sampling of the students was left to be implemented by the liaison and instructors. Instructions were provided to select randomly 3 students currently taking classes from each of the four instructors. Again, the number of potential student respondents ranged from 3 to 12. Packets with the appropriate number of questionnaires and instructions were mailed to the responding institutions' liaisons.[7] The next section discusses the development of the questionnaires.

Questionnaire Development

In the first year of the study, drafts of the six questionnaires to be used at each institution were developed. That development included several rounds of internal and external reviews and subsequent revision. In addition, the questionnaires were pilot tested at three institutions. The results of the pilot testing and draft questionnaire development are documented in Hollenbeck and Dean (1987). In addition, that document provides a brief justification for each questionnaire item.

A final validity check was undertaken in the early weeks of this year of the study through intensive review by project staff and external consultants. The final results--the surveys that were actually utilized--comprise appendix C.

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[7] At the 48 institutions that were visited in person, the project staff conducting the visit acted as liaison to monitor distribution and collection of the survey questionnaires.

Response Analysis

The survey instruments were extensive and, in parts, complex. Nevertheless, a 60 percent response rate was achieved. This rate is quite high for a voluntary mail survey. In this section, we analyze three types of response--institutional response, intrainstitutional response, and item response.

Institutional Response. To determine the representativeness of the 432 institutions that responded, we first examined the characteristics of the 293 institutions that refused to respond. Three types of institutional refusals were encountered. First of all, the CEO of the institution may have explicitly refused cooperation when we first corresponded with him or her to ask for an institutional liaison and listing of instructors. A total of 170 institutions explicitly refused to cooperate in the survey. The reasons given for not cooperating ranged from "too busy" to "we are not a vocational education institution" to "we won't respond because you're asking for salaries." The second kind of refusal is referred to as an implicit refusal. Essentially, here we never received a response to our request for cooperation. In all cases, a second letter was mailed to the CEO and 5 follow-up phone calls were made; but despite these follow-up efforts, no liaison or faculty listings were received. A total of 44 implicit refusals occurred.

The final type of refusal occurred when the institution agreed to participate, named a liaison, and sent faculty listings, but no responses to the survey were received. Again, numerous follow-up telephoning did not elicit responses. A total of 79 institutions fell into this category.

Exhibit 2-3 provides the geographic and institutional type characteristics of the nonrespondents. Overall, the nonresponse rate was about 40 percent, but this was somewhat unevenly distributed across regions and institutional types. Nonresponse was highest in the Northeast and North Central regions of the country, where it was approximately 50 percent. In the South and West, nonresponse was in the range of 30-40 percent. The nonresponse rates for universities and colleges was almost 53 percent, whereas it was virtually identical for community and junior colleges and technical institutes at 37 percent. These statistics suggest that the completed sample slightly overrepresents these two types of institutions and the South and West regions of the country.

Besides institutional type and region, responses were analyzed from another dimension--program type. For the 725 institutions comprising the sample, a total of 1,993 programs were randomly selected (recall that up to 3 programs were chosen at

EXHIBIT 2-3

INSTITUTIONAL NONRESPONDENTS, BY STATE, REGION, AND INSTITUTIONAL TYPE

Region/State	Institution Type: Community and Junior Colleges	Institution Type: Technical Institutes	Institution Type: Colleges and Universities	Total Non-spondents	Non-response Rate
New England	8	7	7	22	46.8%
CT	1	4	0	5	55.6
ME	1	0	0	1	100.0
MA	4	3	3	10	47.6
NH	2	0	3	5	45.5
RI	0	0	1	1	50.0
VT	0	0	0	0	0.0
Middle Atlantic	14	16	21	51	51.5%
NJ	4	3	5	12	57.1
NY	8	1	6	15	45.5
PA	2	12	10	24	53.3
South Atlantic	25	6	8	39	31.2%
DE	1	0	0	1	20.0
DC	0	0	0	0	0.0
FL	6	3	2	11	35.5
GA	4	0	2	6	23.1
MD	2	0	0	2	20.0
NC	10	0	0	10	45.5
SC	1	0	1	2	28.6
VA	0	0	1	1	9.1
WV	1	3	2	6	60.0
East North Central	29	2	20	51	48.6%
IL	10	0	2	12	50.0
IN	3	0	5	8	40.0
MI	8	0	4	12	48.0
OH	5	2	8	15	55.6
WI	3	0	1	4	44.4
East South Central	7	11	2	20	33.9%
AL	4	5	2	11	52.4
KY	1	2	0	3	21.4
MS	1	0	0	1	20.0
TN	1	4	0	5	26.3

EXHIBIT 2-3--Continued

Region/State	Institution Type			Total Non-spondents	Non-response Rate
	Community and Junior Colleges	Technical Institutes	Colleges and Universities		
West North Central	13	13	14	40	42.1%
IA	2	0	1	3	27.3
KS	5	1	5	11	52.4
MN	3	4	2	9	37.5
MO	1	7	3	11	44.0
NE	1	0	1	2	50.0
ND	1	0	0	1	20.0
SD	0	1	2	3	60.0
West South Central	8	10	6	24	31.2%
AR	3	2	0	5	33.3
LA	0	4	2	6	31.6
OK	2	4	0	6	40.0
TX	3	0	4	7	25.0
Mountain	9	3	3	15	38.5%
AZ	3	0	0	3	37.5
CO	3	0	1	4	40.0
ID	0	1	0	1	50.0
MT	1	0	1	2	40.0
NV	2	0	0	2	66.7
NM	0	1	0	1	50.0
UT	0	0	1	1	16.7
WY	0	1	0	1	33.3
Pacific	26	2	3	31	39.2%
AK	2	0	0	2	33.3
CA	18	1	1	20	42.6
HI	2	0	0	2	33.3
OR	2	0	1	3	42.9
WA	2	1	1	4	30.8
TOTAL	139	70	84	293	40.4%
Nonresponse Rate	36.9%	37.2%	52.8%		

each institution). The programs encompassed a wide variety of subject content and even a wide variety of names for the same subject content. The 1,993 programs were classified into approximately 144 different subjects spanning 12 major categories. Exhibit 2-4 lists the programs from the total sample and from the respondents within these 12 categories. The exhibit includes all 3 programs from an institution whether or not the program was one of the two that were sampled for an institution or was the alternate.

The distribution in the exhibit should represent the nation in terms of postsecondary programs for institutions included in the universe. Note that this means an underrepresentation of programs in the fine arts and health fields because of exclusions made in constructing the universe. In examining the response rates given in the exhibit, it can be seen that there is not a great deal of variation across the programs. Occupational home economics programs are, perhaps, slightly overrepresented and human/social sciences programs are slightly underrepresented among responding institutions. Neither disproportion biases the resulting data in our judgment.

The response discussion up to this point has considered an institution as a respondent if any of the surveys sent to it were completed and returned. Also important, of course, is how completely each institution completed its total number of surveys. While the total number of institutions responding was 432, the total number of responses received for each of the survey types was as follows:

Survey	Total Received
Administrator	392
Administrator Supplement	343
Placement Director	374
Chairperson	605
Faculty	1247
Student	3363

Given the nature of the sampling process, it is impossible to measure precisely the response rates for each of the different surveys. We can "guesstimate" the potential sample size with the following assumptions:

- All institutions have an administrator

- 95% of institutions have a placement director

EXHIBIT 2-4

SAMPLED PROGRAMS

(1) Program	(2) Number in Total Sample	(3) Percentage	(4) Number in Responding Sample	(5) Percentage	(6) Response Rate (4) ÷ (2)
Agriculture	74	3.7%	45	3.8%	60.8%
Business	276	13.8	161	13.6	58.3
Secretarial Sciences	301	15.1	183	15.4	60.8
Distributive Sciences	73	3.7	43	3.6	58.9
Industrial Technologies	499	25.0	310	26.1	62.1
Engineering/ Electronics	204	10.2	116	9.8	56.9
Computer and Information Sciences	188	9.4	109	9.2	58.0
Occupational Home Economics	140	7.0	89	7.5	63.6
Health Sciences	30	1.5	21	1.8	70.0
Human/Social Sciences	170	8.5	89	7.5	52.4
Physical Sciences	23	1.2	12	1.0	52.2
Fine Arts	15	0.8	10	0.8	66.7
TOTAL	1993	100.0	1188	100.0	59.6%

- 80% of institutions had 2 potential chairperson respondents; 15% had 1 potential chairperson respondent; and 5% had 0 (average of 1.75 potential chairperson respondents per institution)

- The average number of potential instructor respondents was 3.5 per institution

- The average number of potential student respondents was 10.5 per institution

With those assumptions, we estimate the response rates for the various survey types to be as follows:

Survey	Response Rate
Administrator	54.1%
Administrator Supplement	47.3
Placement Director	54.3
Chairperson	47.2
Faculty	49.1
Student	44.2

Considering the roughness of these response rate estimates, it is hard to make any firm conclusions. It is fairly clear, however, that the response rates were relatively low for the Administrator Supplement and Student questionnaires. We analyze these response rates in more detail in the next section.

Intrainstitutional Response. As discussed above, not all of the 432 responses included the entire set of 21 surveys (1 Administrator, 1 Administrator Supplement, 1 Placement Director, 2 Chair, 4 Faculty, and 12 Students). In some instances, the institution indicated that there was no placement director. In other instances, programs had no chair; or both programs had a single chair. As alluded to before, an institution may have had only one program that was sampled or only one faculty member in a program. In other cases, respondents may have refused to complete the questionnaire.

An intrainstitutional response rate was calculated for each of the 432 respondents using the total number of surveys received from each institution and the total potential number of respondents. Exhibit 2-5 shows the distribution of that rate for the entire sample. Note that over 30 percent of the respondents completed all surveys. We judged the institutions' cooperation to be quite high. Only a small number of institutions completed less than half of their quota of surveys. From the exhibit, it can be observed that the median response rate was between 90-99.9.

EXHIBIT 2-5

INTRAINSTITUTIONAL RESPONSE RATES

	Number of Institutions	Percentage of Institutions
100%	137	31.7%
90-99.9%	103	23.8
80-89.9%	73	16.9
70-79.9%	49	11.3
60.69.9%	32	7.4
50-59.9%	15	3.5
25-49.9%	15	3.5
0.1-24.9%	8	1.9

Exhibit 2-6 provides the (arithmetic) averages of the intrainstitutional response rates by region, state, and institutional type. New England had by far the lowest response rate. This low rate of completions within the responding institutions reinforces a relatively low rate of institutional response suggesting that the resulting sample is particularly skewed away from New England. The Pacific region also has a low institutional response rate, but note that Alaska and Hawaii are responsible for bringing that regional average down. Because of time differences, we did have some difficulty with telephone follow-ups in these two states which may explain the low rates.

Also similar to the institutional response pattern, we find that the intrainstitutional response rates of 4-year institutions were lower than either type of 2-year institutions. The average for colleges and universities was about 80 percent as compared to 85 percent and 86 percent for community and junior colleges, and technical institutes, respectively.

Item Response. The final type of nonresponse that needs to be examined is from the questionnaire items. Appendix D presents response rates for each item for each questionnaire. Exhibit 2-7 summarizes that data. In general, the response rates for the items are quite high. With the exception of the Administrative Official Survey Supplement, the median item response rate for each

EXHIBIT 2-6

INTRAINSTITUTIONAL RESPONSE RATES BY REGION, STATE, AND INSTITUTIONAL TYPE

Region/State	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
New England	80.0%	71.8%	63.7%	72.8%
CT	60.0	-	60.3	60.1
ME	-	-	-	-
MA	83.4	73.5	38.1	76.6
NH	94.1	66.7	74.5	76.5
RI	-	-	50.0	50.0
VT	81.0	-	66.7	76.2
Middle Atlantic	87.9	85.8	69.6	83.2
NJ	87.1	71.2	84.6	81.5
NY	88.3	100.0	65.0	85.0
PA	87.5	90.1	69.5	82.4
South Atlantic	87.3	83.9	77.1	84.8
DE	100.0	76.9	69.9	79.2
DL	-	65.0	-	65.0
FL	86.1	81.6	81.0	83.3
GA	85.0	94.0	59.9	83.6
MD	86.9	52.9	90.0	82.8
NC	89.1	69.2	90.5	87.6
SC	89.4	-	90.5	89.5
VA	88.4	90.0	100.0	89.7
WV	66.7	87.8	90.5	83.1
East North Central	85.8	85.4	86.4	85.9
IL	92.5	90.9	84.6	91.7
IN	68.9	80.0	86.8	77.3
MI	85.2	83.7	89.3	85.8
OH	83.2	90.6	84.2	85.4
WI	98.8	75.0	-	94.0
East South Central	93.9	82.9	84.4	87.4
AL	90.6	80.8	100.0	88.6
KY	90.0	87.1	76.5	85.7
MS	96.2	-	-	96.2
TN	100.0	79.1	84.4	85.5

EXHIBIT 2-6--Continued

Region/State	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
West North Central	87.8	89.0	84.5	88.1
IA	91.0	-	83.3	90.1
KS	73.5	86.3	-	78.6
MN	95.2	91.4	-	92.4
MO	100.0	86.2	79.8	85.9
NE	86.0	-	-	86.0
ND	96.1	-	100.0	97.1
SD	-	95.3	-	95.3
West South Central	81.9	91.7	87.4	86.4
AR	96.2	94.0	73.0	88.1
LA	-	94.2	95.1	94.5
OK	84.1	85.7	-	85.0
TX	79.9	87.5	100.0	81.2
Mountain	86.8	84.8	96.3	88.3
AZ	83.6	-	-	83.6
CO	84.6	72.1	100.0	85.6
ID	-	-	90.5	90.5
MT	-	86.9	90.5	88.1
NV	68.8	-	-	68.8
NM	100.0	-	-	100.0
UT	85.0	95.3	90.5	91.2
WY	100.0	-	-	100.0
Pacific	79.7	-	92.3	80.8
AK	68.5	-	-	68.5
CA	84.1	-	97.1	85.0
HI	44.9	-	87.5	66.4
OR	87.6	-	-	87.6
WA	76.8	-	-	76.8
TOTAL	85.3%	86.2%	80.4%	84.7%

NOTE: - means not applicable.

EXHIBIT 2-7

ITEM RESPONSE RATES

Response Rate	Number of Items Achieving this Rate	Median
Administrative Official Survey		
95.0 - 100.0%	96	95.2%
90.0 - 94.9	40	
85.0 - 89.9	32	
< 85.0	6	
Administrative Official Survey Supplement		
95.0 - 100.0%	3	86.5%
90.0 - 94.9	9	
85.0 - 89.9	7	
< 85.0	6	
Placement Director Survey		
95.0 - 100.0%	37	97.3%
90.0 - 94.9	6	
85.0 - 89.9	1	
< 85.0	0	
Chairperson Survey		
95.0 - 100.0%	59	94.0%
90.0 - 94.9	49	
85.0 - 89.9	19	
< 85.0	7	
Faculty Survey		
95.0 - 100.0%	110	96.9%
90.0 - 94.9	25	
85.0 - 89.9	16	
< 85.0	9	
Student Survey		
95.0 - 100.0%	80	96.1%
90.0 - 94.9	30	
85.0 - 89.9	14	
< 85.0	3	

survey was 95 percent or higher. Not unexpectedly, the items that had the poorest response were personal salary and job history information, and questions that required exact institutional or program data--budgets, enrollments, percentages, etc. Opinion scales and other scalar items had the highest response. All in all, exhaustive analysis suggests that only a handful of items are suspect in terms of validity and reliability.

On-Site Visits

The mail survey will allow statistically valid generalization to the entire population of postsecondary occupational education institutions as we have defined them. But surveys are limited in terms of the depth of information they can capture and often miss or misinterpret evidence about situational factors that explain what is going on and why. For this reason, the project complemented the survey with on-site visits by project staff to achieve a more comprehensive understanding of the institutions that were surveyed. In this section, we document how we selected the sample of institutions to be visited and the procedures followed in conducting the visits.

Sample Site and Selection

The sample size and selection decisions were somewhat arbitrary and judgemental. Because the purpose of the visits was to inform project staff about the context of postsecondary occupational education, the sample needed to reflect the general population of institutions. Therefore, geographic, institutional type, and enrollment variance needed to be generated. Costs prohibited a statistically valid sample size, so the decisions involved balancing a large enough sample to have a variety of institutional environments against the staff and travel costs involved. A target number of 50 on-site visits was set.

The universe listing of institutions was enumerated by institution type (3 categories) and Census Region (Northeast, North Central, South, and West). The frequency of the population across the 12 cells is as follows:

Type	Region Northeast	North Central	South	West	Total
Community & Jr. Colleges	.076	.121	.168	.110	.475
Technical Inst.	.056	.070	.144	.017	.287
Universities & Colleges	.067	.077	.072	.024	.240
TOTAL	.199	.268	.384	.151	1.00

Using this distribution to target the 50 case studies gave us a target sample size by institution-type and Census region. These targets were as follows:

Type	Region Northeast	North Central	South	West	Total
Community & Jr. Colleges	4	6	8	5	23
Technical Inst.	3	4	7	1	15
Universities & Colleges	3	4	4	1	12
TOTAL	10	14	19	7	50

With these targets in mind, we scanned the list of sampled institutions and selected a total of 62 institutions--50 primary sites distributed as above and 12 alternates (1 alternate from each institution type/Census Region cell.)

Procedures

We telephoned the CEO of each primary site institution to request permission to visit the institution, to arrange for an institutional liaison, and to establish a tentative schedule for the visit. The phone calls were followed up with written correspondence. Forty-six of the 50 CEOs for the primary sites agreed to participate and agreement was reached with 4 alternates to replace the primary sites that declined. The remainder of the alternate sites were "returned" to the mail survey sample and were surveyed via that effort.

Instrumentation. At each site, the president of the institution, the individual in charge of placement activities, the two chairpersons selected for the sample, the four faculty members in the survey, students, and employers familiar with the programs were interviewed. In addition, classroom instruction was formally observed.

The interview of the president covered the following topics:

- o Administrative structure of the institution
- o Curriculum decision making (planning, implementing, evaluating)
- o Linkages with business and economic development emphasis
- o Developmental education programs
- o Procedures for keeping faculty and facilities current
- o Linkages with other education and training institutions
- o Innovative practices

The interview with the director of placement covered the following subjects:

- o Extent and nature of involvement in curriculum decision making
- o Business/industry and other external interactions

The chairpersons that were interviewed were asked questions in the following general areas:

- o Curriculum decision making (planning, implementation, evaluation)
- o Faculty concerns (evaluation, staff development, part-time staff)
- o Business/industry and other external interactions (advisory committees)
- o Student preparedness and motivation

The faculty interviews emphasized the following topics:

- o Curriculum input
- o Instruction
- o Student preparedness and motivation
- o Job characteristics and satisfaction

Each faculty member interviewed was also observed in the classroom/work station and information was gathered concerning the following:

- o Effectiveness of time usage
- o Use of training aids such as demonstration equipment
- o Media usage

Several students were interviewed as well about the following topics:

- o Goals and objectives
- o Factors affecting student progress
- o Opinions about instructor and course

Finally, each of the chairpersons interviewed was asked to provide a listing of employers who have hired recent program completers. Several of these employers were randomly selected and interviewed about the institution's curriculum and instruction. The semi-structured instruments for the case study interviews are appended to this report as Appendix E.

Interviewer Training. Prior to the site visits, a training session was held for all of the project staff conducting visits. This 2-day, 16-hour session introduced the project and goals, discussed all of the data collection instruments, involved practice interviews using the instruments, and discussed matters such as travel arrangements, interviewer protocol, and case reporting requirements. The trainees were oriented to their data collection responsibilities through a prototypical on-site visit. Videotapes of lectures and labs were used to practice classroom observation.

Site Visits. Two of the institutions changed their minds and decided not to host a site visit just prior to our scheduled visit so that we could not arrange for suitable replacements. Thus, the final number of site visits was 48. Exhibit 2-8 lists the institutions that were visited and the time frames of the visits. The institutions closely conformed to targets set for region of the country and institutional type presented above. The institutions were located in 38 different states and ranged in enrollment from approximately 500 to over 30,000.

This chapter and appendices B through E to this report attempt to document the technical aspects of the mail survey and on-site data collection. Due to rigorous procedures, considerable follow-up, and high levels of institutional and student cooperation, significant levels of response were achieved. A highly reliable and representative set of data was thus generated to support the analyses comprising this document. Of course, readers interested in more technical detail about sampling or other data collection concerns may contact the authors for such information.

EXHIBIT 2-8

SITE VISIT LISTING

Institution	Type	Location	Week of Visit	Programs Observed
1. Maricopa Tech. Comm. College[a]	1	Phoenix, AZ	April 6-10	Data Entry; Automotive
2. Twin Lakes Vocational Technical School	2	Twin Lakes, AR	April 20-24	Accounting; Welding
3. Napa Valley Comm. College	1	Napa, CA	March 23-27	Secretarial Science; Machine Technology
4. Evergreen Valley Comm. College	1	San Jose, CA	March 16-20	Office Tech; Automotive
5. Emily Griffith Opportunity School	2	Denver, CO	March 30-Apr. 3	Electronics; Accounting
6. AI Prince Regional Voc-Tech School	2	Hartford, CT	May 4-8	Electronics; Graphic Communications
7. Wesley College	3	Dover, DE	March 23-27	Criminal Justice; Computer Science
8. Palm Beach Junior College	1	Palm Beach, FL	March 23-27	Food/hospitality mgmt.; Surveying
9. Ridge Voc-Tech Center	2	Winterhaven, FL	April 6-10	Computer Operator; Clerical
10. Savannah State College	3	Savannah, GA	April 20-24	Electrical Engr.; Mechanical Engr.
11. City College of Chicago--Loop College	1	Chicago, IL	March 16-20	Accounting; Marketing
12. Wm. Rainey Harper College	1	Palatine, IL	March 30-Apr. 3	Electronics; Mech. Engr. Tech.
13. Ball State University	3	Muncie, IN	March 16-20	Industrial Tech; Food Service
14. Scott Community College	1	Bettendorf, IA	April 6-10	Autobody; Accounting
15. Maysville Area Voc-Tech School	2	Maysville, KY	March 2-6	Industrial Elec.; Auto Mechanics
16. Alexandria Voc-Tech Inst.	2	Alexandria, LA	May 4-8	Masonry; Office Occupations

EXHIBIT 2-8--Continued

Institution	Type	Location	Week of Visit	Programs Observed
17. Catonsville Comm. College	1	Catonsville, MD	April 27-May 1	Office Technology; Surveying
18. Fisher Junior College	1	Boston, MA	April 6-10	Fashion; Early Childhood Development
19. Women's Tech	2	Boston, MA	March 23-27	Computer Electronics; Drafting
20. Southeast Oakland VE Cntr.	2	Royal Oak, MI	March 16-20	Autobody; Small Engine Repair
21. Andrews University	3	Berrien Springs, MI	May 11-15	Autobody; Engineering Tech.
22. St. Paul Tech. Voc. Inst.	2	St.Paul, MN	April 27-30	Cabinetmaking; Truck Mechanics
23. SE Missouri State Univ.	3	Cape Girardeau, MO	April 27-May 1	Computer Science; Childcare
24. North County Tech. School	2	St. Louis, MO	March 2-6	Air Conditioning/Refrigeration; Carpentry
25. College of Great Falls	3	Great Falls, MT	March 16-20	Computer Science; Criminal Justice
26. Central Community College	1	Grand Island, NE	March 16-20	Electronics; Welding
27. New Hampshire Tech. Inst.	2	Concord, NH	March 23-27	Architecture; Elec. Engr.
28. Atlantic Comm. College	1	Mays Landing, NJ	March 30-Apr.3	Bus. Admin.; Economics
29. Fashion Inst. of Tech.	3	New York, NY	March 23-27	Fashion Design; Fashion Merchandising
30. Central Piedmont CC	1	Charlotte, NC	May 4-8	Marketing; Early Childhood Education
31. ND State School of Science	1	Wahpeton, ND	March 16-20	Enrivonmental Systems; Welding/Robotics
32. Ohio Univ.--Chillicothe	3	Chillicothe, OH	May 4-8	Law Enforcement; Bus. Mgnt.
33. Francis Tuttle Area Vo-Tech Center	2	Oklahoma City, OK	May 4-8	Machine Tech; Electronics
34. Umpqua Community College	1	Umpqua, OR	April 27-May 1	Automotive; Computer Prog.
35. Univ. of Pittsburgh--Bradford	3	Bradford, PA	April 13-17	Petroleum Tech.; Computer Programming
36. Philadelphia Comm. College	1	Philadelphia, PA	March 30-Apr. 3	Photography; Marketing
37. Roger Williams College	3	Providence, RI	March 30-Apr. 3	Elec. Engr.; Paralegal
38. Spartanburg Meth. College	3	Spartanburg, SC	April 13-17	Retail Mgmt.; Criminal Justice
39. Trident Technical College	1	Charleston, SC	May 11-15	Paralegal; Industrial Tech.

EXHIBIT 2-8--Continued

Institution	Type	Location	Week of Visit	Programs Observed
40. Anderson College	1	Anderson, SC	April 6-10	Fashion; Secretarial Science
41. State Tech. Inst., Memphis	2	Memphis, TN	May 11-15	Computer Science; Building Construction
42. Nashville State Tech. Inst.	1	Nashville, TN	May 18-22	Computer Tech.; Electronics
43. San Antonio College	1	San Antonio, TX	April 6-10	Child Development; Electronics
44. Salt Lake Tech. Inst.[b]	1	Salt Lake City, UT	April 20-24	Scient. Engr.; Indust. Tech.
45. Vermont Technical College	1	Randolph Center, VT	March 9-13	Building Trades; Dairy Farm Management
46. Tidewater Comm. College	1	Chesapeake, VA	April 20-24	Automotive; Word Processing
47. Walla Walla Comm. College	1	Walla Walla, WA	April 13-17	Office Occns., Automotive
48. North Central Tech. Inst.	1	Wausau, WI	April 6-10	Insurance; Architecture & Design

[a] Now named Gateway Community College
[b] Formerly Utah Technical Institute

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CHAPTER 3

INFLUENCES ON INSTRUCTIONAL DELIVERY AND INVOLVEMENT IN POSTSECONDARY EDUCATION

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As "disengagement" and "instrumentalism" become increasingly important behavioral patterns in postsecondary education (Astin 1987 and Boyer 1986), understanding the personal, institutional, and extra-institutional factors influencing instructional delivery takes on added importance.[1] The often conflicting attitudes, value orientations, and expectations of faculty, students, and administrators involved in teaching and learning may be important determinants of the delivery of instruction. Given this network of psychological forces, perceptions of the factors influencing instructional delivery may vary among different subgroups depending on their background characteristics, franchisement, and involvement within the institution. For example, faculty members holding values of "selectivity," "quality control," and "academic scholarship" learned in graduate school may think differently about the factors influencing instructional delivery than administrators holding values of "pragmatism" and "adaptation."

Although there is considerable research on the perceptions that particular groups hold in relationship to instruction (Boyer 1986 and Peterson, et al. 1987), there is little systematic information about the combined effects of personal, instructional, and extra-institutional characteristics on instructional delivery. The primary orientation of the research to date has been assessment of the effects on faculty and students of interventions designed to change the delivery of instruction (Rinehart 1983; Ulmer 1986; Stover 1986; and Virginia Community College System 1986). Efforts to assess the combined effects of personal, institutional, and extra-institutional influences on instructional delivery often have met with frustration or have yielded contradictory findings. For example, practitioners have found that unless significant resources are available (time, money, and expertise) to study an array of forces affecting instructional delivery, meaningful research on the topic is difficult if not impossible. Researchers have discovered that multiple forces involved in instructional delivery coalesce in ways that produce differentiation in study results. Stiegelbauer, et al. (1985) found that the concept of an idea for application was a critical factor underlying faculty willingness to participate in innovation related to the delivery of instruction. Slaugh and Thomas (1985), however, found no differences among faculty regarding their perceptions of barriers to innovation or openness to participation based on the concept of an idea. The environment had an effect on faculty perceptions of barriers to the implementation of change. Similarly, Krupp (1986) found that receptivity to innovation is not so much a function of the idea underlying the need for innovation as it is dependent on barriers in the environment and life stage development of those expected to support innovation.

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[1] Instructional delivery refers to the policies, practices, and procedures used by faculty to transmit knowledge to students in organized classroom settings.

The meager and inconsistent findings that are available concerning the personal, institutional, and extra-institutional influences on instructional delivery are not surprising, given the resources required to conduct meaningful research in this area, the exploratory nature of research, and samples that can be used as a basis for determination of research findings. Samples are most easily obtained from two-year colleges with a majority of students enrolled in occupational programs. Measurement is an easier task in institutions with short-term, clear-cut instructional goals reflective of a direct relationship between curricula and the job market.

Causal Model

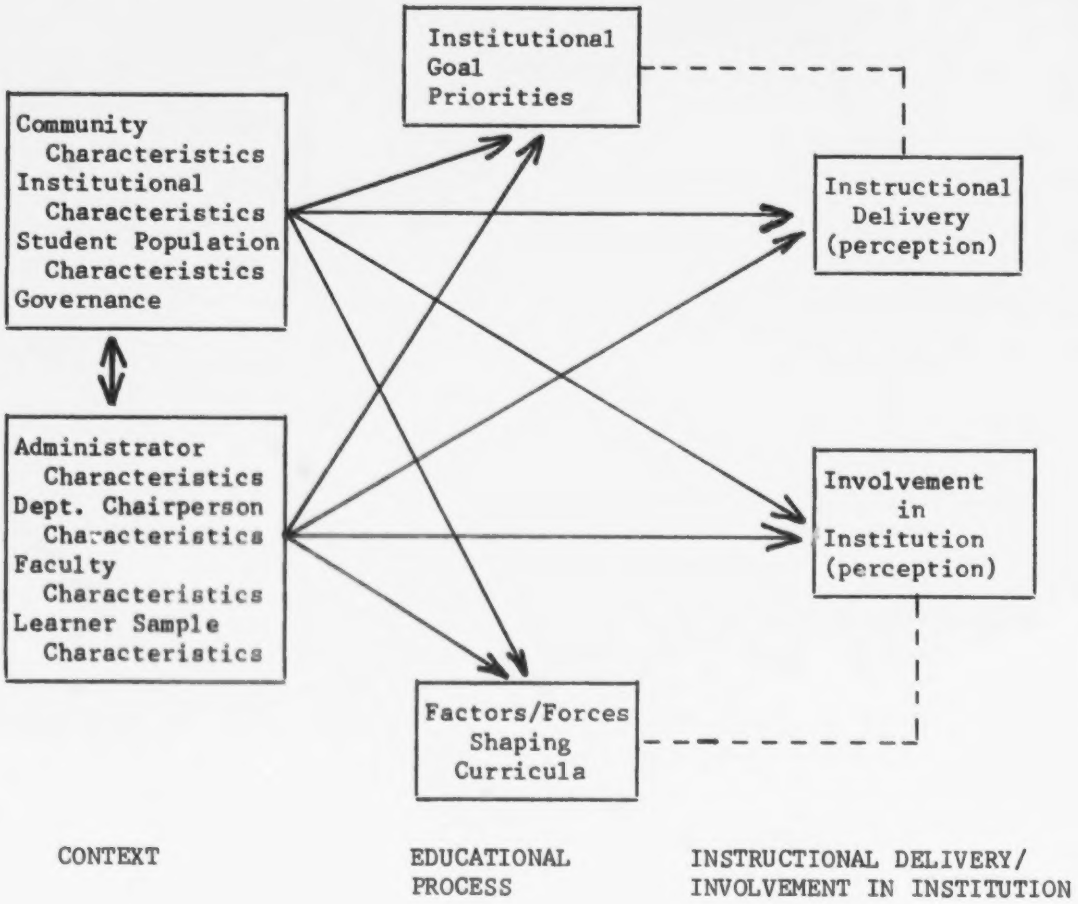
The central purpose of this paper is to propose and test a causal model of selected personal, institutional, and extra-institutional influences on instructional delivery. The model incorporates multiple measures of (a) community characteristics, (b) institutional characteristics, (c) student population characteristics, and (d) governance. The criterion measure of instructional delivery is perceptions held by administrators, department chairpersons, faculty, and students of (a) institutional goal priorities, (b) factors and forces shaping curricula, (c) instructional and grading practices of faculty, (d) instructional evaluation and development, and (e) involvement in the institution. Prior research has shown that the best estimates of subgroup perceptions of instruction are characteristics of the setting in which instruction occurs (Rinehart 1983, Watkins 1982) and the nature and intensity of involvement in the institution (Astin 1987 and Boyer 1986). The centrality of "setting characteristics" and "involvement" to subsequent perceptions of instructional delivery are also well-established. For example, Guskey, et al. (1982) have shown that the campus and classroom environment in which instruction takes place and the commitment of instructors are the single best predictors of subsequent perceptions and performance in instructional delivery.

Although setting characteristics and involvement have been shown to be predictors of subsequent perceptions, the relationship is obviously far from perfect. This may be especially true in terms of the attitudes applied to delivery of instruction given differences in subgroup involvement in the institution (for instance, students seeking financial empowerment through instruction and faculty seeking academic scholarship). A related interpretive perspective is the internal/external source of individual or group perceptions. The perceptions held in relationship to instructional delivery may be the result of internal factors (for instance, academic orientation) or external conditions which comprise the milieu for instruction (for instance, instructional expenditures per FTE student and economic disadvantagement of the population in the institution's service region). Although these caveats regarding the accuracy and sources of perception are not central in the causal model described in exhibit 3-1, they provide a more complete understanding of the complexity of the "perception" construct.

The first set of variables in the proposed causal model are exogenous variables and represent institutional and extra-institutional influences on instructional delivery (for example, location, size of enrollment, composition of board of trustees, student degree expectations, involvement of parties in governance). This cluster of institutional and extra-institutional influences provides the setting for subgroup perceptions of instructional delivery. The background characteristics of administrative, department chairperson, faculty, and student subgroups constitute a second set of exogenous variables in the causal model and represent variations in the values and expectations applied to instruction (members of different subgroups hold different expectations of instruction such as academic scholarship, enhancement of income, institutional quality). It is from these variable sets that subgroups begin to derive their notions about the educational process (for example, the effects of race/ethnicity on institutional goal priorities and factors/forces shaping curricula), the third set of variables in the model. The model posits that subgroup perceptions of influences on instructional delivery and involvement are shaped primarily by background characteristics and context factors with the influence of educational process variables being executed in an indirect manner. These three sets of variables are seen to determine subgroup perceptions of influences on instructional delivery in postsecondary education (for example, the instructional and grading practices employed by faculty, policy and procedure changes, and instructional innovation) and involvement (for example, participation in activities outside the classroom related to curriculum and course development). The context and characteristics variables are assumed to be the primary determinant of subgroup perceptions of influences on instructional delivery and involvement in the institution whereas the education process variables in the model are assumed to exert their influence in an indirect manner (that is through the

EXHIBIT 3-1

CAUSAL MODEL OF INSTRUCTIONAL DELIVERY AND INVOLVEMENT IN POSTSECONDARY EDUCATION


Institutional Goal Priorities
Community Characteristics
Institutional Characteristics
Student Population Characteristics
Governance
Instructional Delivery (perception)
Administrator Characteristics
Dept. Chairperson Characteristics
Faculty Characteristics
Learner Sample Characteristics
Involvement in Institution (perception)
Factors/Forces Shaping Curricula
CONTEXT
EDUCATIONAL PROCESS
INSTRUCTIONAL DELIVERY/
INVOLVEMENT IN INSTITUTION

perceptions held by different subgroups in different institutional settings).

The causal sequence of variables in the model is grounded in extant research findings demonstrating the influence of institutional and extra-institutional factors and subsequent perceptions of instructional delivery and involvement (Peterson, et al. 1987). For example, the characteristics of undergraduate institutions attended (size, location, control) and the service region from which students are drawn (urban/rural, economic development, population composition) have been shown to be related to instructional delivery (Richardson, et al. 1984). In addition, evidence suggests that perceptions of individuals and groups held in relationship to educational process dimensions (institutional goal priorities, structure of curricula, academic standards) vary in relation to the background characteristics, expectations, and nature of involvement of those participating in instruction (Roueche 1984). Because empirical evidence substantiates that individual background characteristics lead to involvement in institutions with particular educational process characteristics, the educational process variable is placed after the context and background characteristics variables in the causal model primarily because of the temporal order of these three sets of variables. That is, background characteristics and context characteristics induce individuals to form certain impressions about the educational process prior to participation in instruction.

Method

Sample and Variables

Data for this paper were obtained from the 1987 national study of Postsecondary Occupational Education Delivery conducted by the National Center for Research in Vocational Education. The overall sample included 376 administrators, 364 placement directors, 605 academic department chairpersons, 1,239 faculty, and 3,315 students from 432 institutions. Of these institutions, 238 were two-year vocational/technical institutes, 118 were community/junior colleges, and 75 were four-year colleges with an occupational emphasis. The five respondent groups completed an initial survey in the Spring, 1987, that collected a broad array of background information related to patterns of governance, factors and actors influencing curriculum and instruction, institutional goal priorities, faculty grading and instructional practices, evaluation, innovation, and involvement in the institution. A subsample of 48 institutions were chosen for site visits to obtain detailed data about instructional delivery. At each campus, interviews were conducted with the chief executive officer, placement director, two department chairpersons, four instructors, and twelve students. Additionally, four periods of classroom instruction were observed to document instructional delivery. The placement directors were deleted from the analysis of data for the purposes of this paper because of lack of centrality to the variable sets.

The model estimated in this paper (see exhibit 3-1) includes four different sets of variables organized in a causal sequence: (1) institutional and extra-institutional influences on instructional delivery, (2) background characteristics of administrator, department chair, faculty, and student groups, (3) educational process characteristics, and (4) perceptions of instructional delivery. Exhibit 3-2 presents full operational definitions for all variables included in the model. The background characteristics data set was excluded from analysis in order to reduce the number of variables in the examination of results.

Analyses

A preliminary analysis was conducted to determine frequency and percentage distributions for each variable in a matrix relationship with the other variables. This seemed advisable given the voluminous amount of information that could be included in the analysis unless efforts were made to reduce the data. The relationships in exhibit 3-3 were examined.

Results

The results of analysis are reported in four data set categories representing different combinations of variables in the causal model. These categories are the following:

- Extra-institutional characteristics X Educational process, instructional delivery, and institutional involvement variables
- Institutional characteristics X Educational process, instructional delivery, and institutional involvement variables
- Student population characteristics X Educational process, instructional delivery, and institutional involvement variables
- Governance X Educational process, instructional delivery, and institutional involvement variables

Data in each category are classified for administrative official, department chairperson, faculty, and student subgroups. The data

EXHIBIT 3-2

VARIABLE DEFINITIONS

Variables	Definitions
Context (1985-1986)	
o Extra-institutional characteristics	
- location of college	- rural/urban/suburban
- race/ethnicity of service region	- American Indian/Asian/black/ Hispanic/white/other
- economic disadvantagement of service region population	- percentage of population in area served by institution that is economically disadvantaged
o Institutional characteristics	
- type of institution	- vocational-technical institutions/community colleges/universities or colleges
- operating budget	- total general fund budget for current fiscal year
- expenditures	- percentage of budget spent on instruction/administration/ student services/equipment/ facilities/other
- enrollment	- total full-time and part-time enrollment
o Student population characteristics	
- gender	- male/female
- race/ethnicity	- American Indian/Asian/Black/ Hispanic/white/other
- estimated family income	- above $25,000/15,000-25,000/ 10,000-14,999/below $10,000/
- attrition rate	- students who enter, but leave prior to receiving degree or certificates
o Pattern(s) of Governance	
- board of trustees composition	- board members elected vs. appointed/board member representing business/board members representing labor

EXHIBIT 3-2--Continued

Variables	Definitions
- requirements for board approval	- board member approval required for: course offerings/programs/staff memberships/funding/applications/hiring/dismissal of faculty
- assessment of parties involved in governance	- assessment of state agency, board of trustees, administrator, and department involvement in institutional decisions
- business/industry involvement in curriculum decisions	- self-explanatory
Background Characteristics	
o Administrator, department chairperson, faculty, and student characteristics	
- age	- year of birth
- gender	- male/female
- race/ethnicity	- American Indian/Asian/black/Hispanic/white/other
- academic degrees	- associate/bachelor/master/doctorate
- non-academic training (faculty)	- non-school based training in subject fields
- high school program (students)	- general/college prep/vocational
- high school grades (students)	- mostly A's/mostly B's/mostly C's/mostly D's/below D
- financial status (students)	- independent/dependent
- reasons for college choice (students)	- factors influencing choice of institution
- student status	- full-time/part-time
Educational Process	
o Instructional goal priorities	- assessment of degree of importance attached to various goals (develop basic skills, preparation for further education, etc.)
o Factors/forces shaping curriculum	
- individuals/groups influential in establishing/revising curriculum and determining instructional approaches	- self-explanatory

EXHIBIT 3-2--Continued

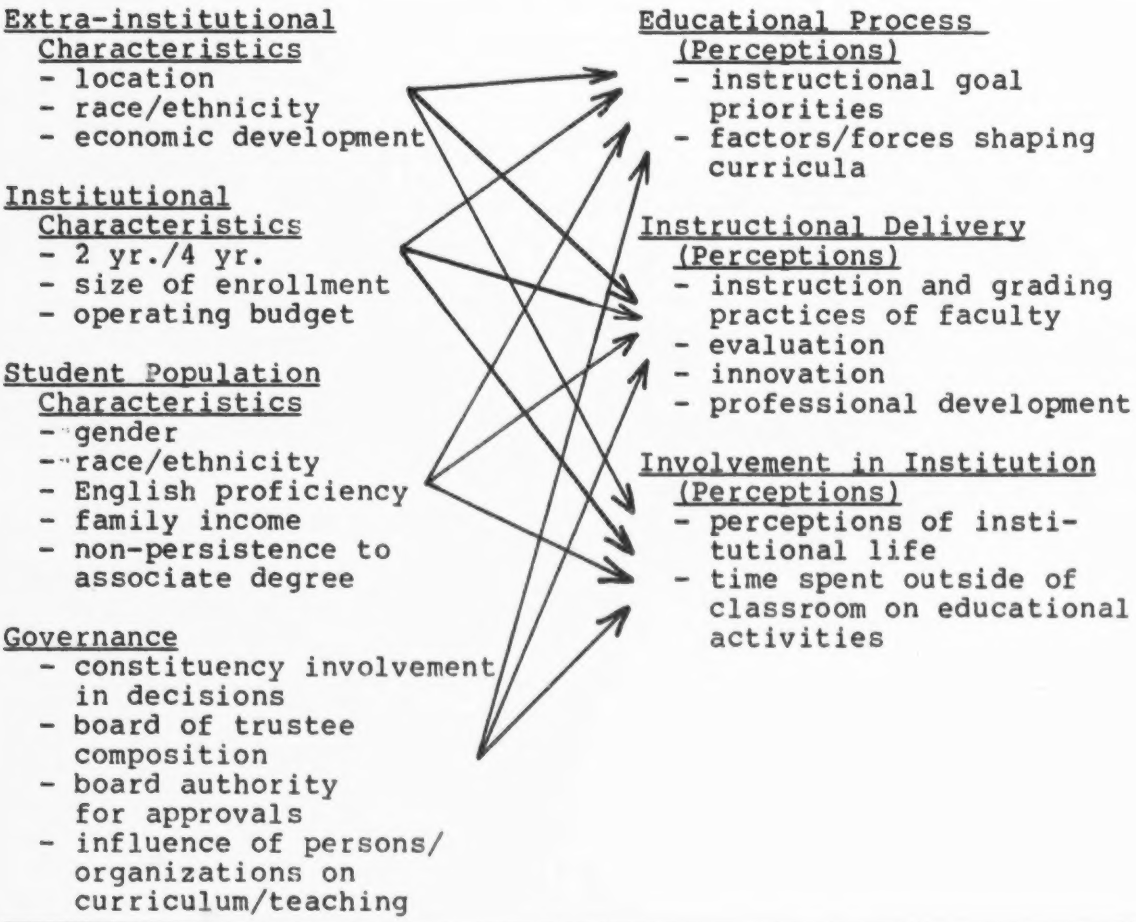
Variables	Definitions
- factors influencing curriculum	- assessment of factors exerting influence on curricululm and instruction (basic skills prep. of students, part-time staff, quality of facilities, etc.)
Instructional Delivery	
o Instructional and grading practices of faculty	
- individuals/groups influencing instructional approaches	- self-explanatory
- faculty influence and control over course activities	- influence over course selection, development, content, instructional techniques, textbooks.
- practices used by faculty to evaluate student progress and performance	- number of exams and quizzes administered in a grading period/types of questions
- writing assignments	- number of writing assignments during grading period
- class time spent on various activities	- percentage of class time spent on maintenance activities/instruction/ practice/other
- grading practices employed by faculty	- importance of specific criteria when setting grades
- up-to-date equipment and facilities used in instruction	- currency of equipment and materials used in classroom
- cooperative education and work study experiences required in courses	- requirement for students to complete a cooperative work experince as part of education
- competency-based strategies used in program/ courses	- faculty use of specific competency based strategies in courses (progress charts, computer recording, employer ratings, etc.)
- student need for special services/availability of services/use of services	- percentage of students needing and receiving special services (basic skills instruction, pre-tech courses, tutorial assistance, etc.)
- individualized learning activities and experiences	- use of individualized teaching methods by faculty

EXHIBIT 3-2--Continued

Variables	Definitions
- policy and procedure changes to improve instruction	- policy and procedure changes to improve quality of instruction (tighter admission requirements, stricter grading, faculty recognition, student retention policies, etc.)
- frequency of internal program evaluation	- every year/two years/greater than every other year/as needed
- frequency of external program evaluation	- every year/two years/greater than every other year/as needed
- professional development requirement for instructors	- yes/no
- departmental professional development budget	- annual allocation for professional development
- interviews with employers to determine satisfaction	- faculty efforts to interview employers concerning student quality
Involvement	
o Involvement in institution	
- hours spent outside classroom in institution-related activities	- time spent on: office hours, administrative forms, counseling students, etc.
- time spent per month with specific groups on academic activities	- time spent with dept. heads, advisory committees, other instructors, etc. on course planning and curriculum development
- attitudes toward specific dimensions of institution life	- agreement or disagreement with statements about institution life
- student participation in campus activities	- self-explanatory

EXHIBIT 3-3

RELATIONSHIPS IN THE MODEL



Extra-institutional Characteristics
- location
- race/ethnicity
- economic development

Institutional Characteristics
- 2 yr./4 yr.
- size of enrollment
- operating budget

Student Population Characteristics
- gender
- race/ethnicity
- English proficiency
- family income
- non-persistence to associate degree

Governance
- constituency involvement in decisions
- board of trustee composition
- board authority for approvals
- influence of persons/organizations on curriculum/teaching

Educational Process (Perceptions)
- instructional goal priorities
- factors/forces shaping curricula

Instructional Delivery (Perceptions)
- instruction and grading practices of faculty
- evaluation
- innovation
- professional development

Involvement in Institution (Perceptions)
- perceptions of institutional life
- time spent outside of classroom on educational activities

are presented as an expression of the relationship between selected variables in the causal model for each subgroup. To illustrate, the results of the analysis for the relationship between extra-institutional characteristics (college location, race and ethnicity of service region, and economic development) and educational process variables (instructional goal priorities and factors/forces shaping curricula and instruction) are reported for each subgroup in a sequential arrangement matching characteristics indicators (college location) with educational process indicators (instructional goal priorities). Singular emphasis is placed on significant relationships at the .05 level with the reporting of results limited to correlations representing noteworthy relationships between the variables in the causal model.

Relationship of extra-institutional characteristics to educational process, instructional delivery, and institutional involvement variables. Extra-institutional characteristics are those attributes of the institution's service region that may account for variation in subgroup perceptions of educational process, instructional delivery, and involvement in the institution. The general pattern of influences exerted by the three variables in this category (location, race/ethnicity of service region, and economic disadvantagement of service region population) when examined in relationship to the educational process variables is rather similar for specific subgroups. With the exception of "preparing students to be competent consumers" (for administrative officials), there is sparse evidence of significance among subgroups in institutions located in rural, urban, and suburban regions with respect to the degree of importance attached to instructional goals. Administrative officials and department chairpersons in rural, urban, and suburban institutions exhibit little variation in ratings assigned to instructional goals (preparing students to be good citizens, develop basic skills, develop problem-solving abilities, prepare students to be competent consumers, preparation for further schooling, occupational training, broad general career preparation, and job placement). When attention shifts to the relationship between race/ethnicity of the institution's service region population and subgroup perceptions of instructional goals, there is a significant correlation between the percentage of the population in the region served by the institution that is black and preparation of students to be good citizens and development of basic skills. Similarly, significance obtains in the correlation between preparation for further schooling and the percentage of the service region population that is Hispanic.

Turning to the relationship between the instructional goal ratings of subgroups and the percentage of the population in the service region that is economically disadvantaged, significance is observed for the following goals:

Administrative Officials

--prepare students to be good citizens
--prepare students to be competent consumers

Department Chairpersons

--prepare students to be good citizens
--develop basic skills
--prepare students to be competent consumers

Administrative official and department chairperson perceptions of the actual influence of individuals and organizations in establishing and revising the curriculum and determining instructional approaches show a mixed pattern when examined in relationship to extra-institutional characteristics. For department chairpersons, significant correlations are observed between the percentage of the service region population that is black and the influence of state administrative agencies and department chairpersons in establishing and revising curricula. Significant correlations are also noted for (a) the percentage of the population that is white and the influence of faculty unions and state administrative agencies in establishing/revising curricula and (b) the percentage of the population that is Asian and the influence of advisory and governing boards in curriculum change. For administrative officials, significant correlations are observed for (a) the percentage of the service region population that is black and the influence of state administrative agencies, department chairpersons, instructors, and business and industry representatives in curriculum change; and (b) the percentage of the population that is white and the influence of instructors, parents, business and industry representatives, and state education administrative agencies. There is also evidence of significance in the correlation between college location (rural/urban/suburban) and instructors and parents as influential groups in curriculum change in the perceptual field of administrative officials.

The relationship of extra-institutional characteristics to instructional delivery variables can be described in terms of noteworthy correlations between attributes of the service region and policies, practices, and procedures used in instruction. Of particular interest are correlations between race/ethnicity of the population in the institution's service region and instructional delivery. A variable in this category indicating causation is policy and procedural changes affecting instruction. Significant correlations are noted for administrative officials between the percentage of the service region population that is black and the use of "merit pay" and "formal recognition of good teaching" as policy/procedural changes to improve instructional delivery. This pattern intensifies when attention shifts to department chairperson perceptions of policy and procedural changes in instruction. Significant correlations are observed for (a) the percentage of the service region population that is Hispanic and policy changes involving "added requirements for courses outside the program" and "stiffened hiring standards for faculty" and (b) the percentage of the service region population that is white and policy changes involving "increased completion requirements," "competency testing," "increased program entrance requirements," "stiffened grading standards," "increased emphasis on basic skills," "added requirements for courses outside of program," and "special emphasis on retention."

It is interesting to note that significance does not obtain for correlations involving department chairperson perceptions of the use of competency-based strategies in instructional delivery and extra-institutional variables.

As would be expected, however, significance is noted in correlations between the percentage of the service region population that is black, Native American, white, or economically disadvantaged and the availability of special services to students (see exhibit 3-4).

EXHIBIT 3-4

CORRELATIONS BETWEEN RACE/ETHNICITY AND SPECIAL SERVICES

Special Services Available to Students	Percentage of Service Region Population*			
	Native American	Black	White	Economically Disadvantaged
Developmental reading	C	C	C	F
Developmental math	C	C		
Pre-tech courses		C		FC
Individualized counseling				
Tutorial assistance		C	FC	F

NOTE: * = .05 significance
F = Faculty
C = Department chairperson

Examination of faculty subgroup data reveals little evidence of patterning in correlations involving instructional delivery and extra-institutional variables. Scattered evidence is available to attest to correlations between college location (rural/urban/suburban) and grading criteria (absolute level of achievement), the use and frequency of quizzes, and how class time was spent (instruction and student skill practice). Moreover, there is evidence to suggest a relationship between (a) the use of subjective questions on tests and the percentage of the service region population that is Asian or black and (b) the percentage of class time spent on instruction and student practice of skills and the percentage of the service region population that is economically disadvantaged. With these exceptions, limited evidence is found of causation between extra-institutional characteristics and faculty perceptions of instructional delivery.

The general pattern of involvement in the institution for department chair, faculty, and student subgroups examined in context with extra-institutional variables is rather similar across groups with the exception of department chair involvement in specific activities outside of class and faculty and student assessment of college climate. Significance is noted in the correlation involving institution location and department chair involvement in out-of-class activities such as extra-curricular activities, development of alternative instructional materials and activities to meet the special help needs of students, and obtainment of educational professional training. Similarly, department chairpersons are much more likely as a group to evidence significant relationships between out-of-class activities (professional development, development of alternative materials/activities, extra-curricular activities, tutoring, and personal problem counseling) and percentage of the service region population that is Native American. This may be due to the unique teaching and learning problems faced by institutions serving a large native American population. A different pattern of results is noted for the faculty subgroup. Significance is noted for the correlations (a) between the percentage of the service region population that is black and hours spent outside of class tutoring and developing alternative materials and activities for students and (b) the percentage of the service region population that is white and hours spent outside of class completing forms and paperwork, counseling students about personal problems, tutoring, and developing alternative activities and materials.

A relationship worthy of notation is the correlation between faculty perceptions of institutional climate (pattern of use of drugs and alcohol by students in institution, "family" atmosphere of institution, and "positive" climate in the institution) and the percentage of the service region population that is black. Assessment of the institutional climate (caring instructors, school spirit in student body, library facilities, and equipment) tends to vary within the student subgroup in relationship to college location (rural/urban/suburban). Significance is also noted in the student subgroup in the correlations involving (a) difficulty of coursework and the percentage of the service region population that is black and (b) caring instructors, entering student perceptions of course difficulty, and library facilities and the percentage of the service region population that is Hispanic. Finally, differentiation is noted in the student subgroup in terms of participation in particular types of activities and college location (drama and honorary societies), percentage of the regional population that is black (band/chorus/dance, honorary clubs and societies, school newspaper, and student government), and the percentage of the regional population that is economically disadvantaged (band/chorus/dance and honorary clubs and societies).

Relationship of institutional characteristics to educational process, instructional delivery, and institutional involvement variables. Institutional characteristics are those attributes (community college/technical institute/university or college, student enrollment, operating budget, revenue, and expenditures) that may account for variation in subgroup perceptions of the educational process, instructional delivery, and involvement in the institution.

Only two of the eight instructional goals (preparation for further schooling and training for specific occupations) show significance for both administrative officials and department chairpersons in relationship to institutional type. Mixed results are apparent with respect to correlations describing the relationship between institutional type and subgroup perceptions of the influence of individuals and groups in establishing and revising curricula and determining instructional approaches. Significance is evident in a number of relationships for the educational process variables (see exhibit 3-5).

Only in the case of "business/industry representative" and "JTPA/PIC" were significant correlations demonstrated between institutional type and individuals and organizations influential in determining curricula and instructional approaches for both the administrative official and department chairperson subgroups. With the exception of "student disciplinary problems restricting instructional delivery" and "competition for students from other institutions" (administrative officials), there is no evidence of significance in the relationship between institutional type and assessment of factors influencing curriculum and instruction.

Turning attention to the relationship between educational process variables (instructional goal priorities, influential individuals and organizations in determining curricula and instructional approaches, and assessment of factors in instruction) and institution enrollment, operating budget, revenue and expenditures, multiple patterns can be observed among the administrative official and department chairperson subgroups. Evidence of consistency among administrative officials and department chairpersons is observed with respect to the relationship of full-time student enrollment in occupational programs and the importance of instructional goals related to occupational training, general preparation for a career, and placement in jobs. Administrative officials exhibited a similar pattern of goal priority assessment in correlations involving

EXHIBIT 3-5

CORRELATIONS BETWEEN INSTITUTIONAL TYPE AND SUBGROUP PERCEPTIONS OF INDIVIDUAL AND ORGANIZATION INFLUENCE IN DETERMINING CURRICULA AND INSTRUCTIONAL APPROACHES

Individuals and Organizations with Actual Influence in:	Subgroup	
	Administrative Officials	Department Chairpersons
Establishing and revising curricula		
- chief administrative officer	X	
- parents	X	
- business and industry representatives	X	X
- JTPA/PIC	X	
- institutional advisory or governing board		X
- faculty unions		X
Determining Instructional Approaches		
- chief administrative officer	X	
- JTPA/PIC	X	X
- business and industry representatives		X

students enrolled part-time in occupational programs. The correlations for department chairpersons showed no evidence of clustering beyond the full-time student indicators for the the enrollment variable.

There is almost no evidence of clustering in correlations for administrative official and department chairperson subgroups describing the relationship between instructional goal priorities and (a) operating budget, (b) revenue sources, and (c) institutional general fund expenditures. The most significant evidence of clustering for these institutional characteristic variables occurs for indicator variables describing influential individuals and organizations in curriculum establishment and revision. For example, significant correlations are observed for the relationship between specific individuals and organizations (institutional governing boards, business and industry representatives, and state agencies) as influential in establishing and revising curricula and public and private sources of revenue and the institutional budget for both the administrative official and department chairperson groups. It is interesting to note that few relationships and absolutely no evidence of clustering exists for correlations describing the linkage of revenue sources and individuals and organizations influential in determining instructional approaches among department chairpersons. For administrative officials the pattern is different as significant correlations are noted for the relationship of advisory boards and business and industry representatives to public and private sources of revenue.

Finally, no evidence is found of clustering in correlations for either subgroup describing the relationship between institutional expenditures and individuals and organizations influential in determination of curricula and approaches to instruction. Nor is there evidence of clustering or patterning in correlations describing administrative official and department chairperson perceptions of factors influential in instruction and (a) enrollment, (b) operating budget, (c) sources of revenue, and (d) institutional expenditures.

Institutional characteristic variables (institutional type, enrollment, operating budget, and sources or revenue) do not exhibit any pattern in relationship with instructional delivery variables such as policies and procedures for improving instructional effectiveness, competency-based strategies, special services for students, grading practices, and progress evaluation techniques. Specific examples of significant correlations are illustrated in exhibit 3-6. The only patterning that can be observed is that for the faculty subgroup explicit in the relationship of (a) special services available to students, competency-based strategies, and percentage of class time spent on particular activities to (b) sources of revenue. In a few isolated cases significant correlations obtain for more than one subgroup on the same variable (e.g., progress charts x federal revenue and standardized written tests x federal revenue).

EXHIBIT 3-6

CORRELATIONS BETWEEN INSTITUTIONAL CHARACTERISTICS AND SELECTED INSTRUCTIONAL DELIVERY VARIABLES

	Institutional Characteristics											
		Enrollment					Revenue Sources					
Instructional Delivery Variables	Type	FT Occ.	FT L.A.	PT Occ.	PT L.A.	Operating Budget	Local	State	Fed.	Tuit.	Priv.	Oth.
Implementation of competency based strategies												
-progress charts	C			C			F	F	F/C	F	F	F
-mastery charts	C			C			F		C	F		
-standardized written tests	C							F	F/C			F
-skills performance tests (standardized)	C							F	F/C	F	F	F
-teacher constructed skills tests	F								C			
Policies/procedures to improve instructional effectiveness												
-tighter admissions requirements	A										A	
-emphasis on retention of special students	A/C					A	A/C					
-merit pay	A				A		A					
-stiffer hiring standards for faculty	A											
-increased emphasis on basic skills	C											
-stiffer grading		A										
Special services for students												
-developmental reading	F	F				F	C	F		F	F	F
-developmental math	F	F				F		F		F	F	F
-pre-tech courses		F				F		F	C	F	F	
-individualized counseling										F/C		
-special tutorial	F			F	F	F	F		F		C	C
Criteria for grading/importance												
-absolute achievement	F											
-relative achievement												F

EXHIBIT 3-6--Continued

Instructional Delivery Variables	Institutional Characteristics											
		Enrollment					Revenue Sources					
	Type	FT Occ.	FT L.A.	PT Occ.	PT L.A.	Operating Budget	Local	State	Fed.	Tuit.	Priv.	Oth.
-individual progress	F					F	F		F	F		F
-effort	F					F	F					F
-class participation						F	F					F
Professional development requirement				C				C	C	C		C
Individualized learning activities				C	C	C		C	C	C		
Types of questions on tests												
-objective					F	F					F	
-subjective										F		F
-demonstrative						F	F			F		F
Percentage of class time spent												
-maintenance activities						F				F	F	F
-instruction						F	F	F	F	F	F	F
-skill practice						F	F	F	F	F	F	F

NOTE: A = Significant correlation (.05) administrative official subgroup
C = Significant correlation (.05) department chairperson subgroup
F = Significant correlation (.05) faculty subgroup

Examination of the relationship between involvement in the institution and institutional characteristics for department chairperson, faculty and student subgroups reveals multiple patterns of relationship between the variables. First, differences can be observed in correlations involving institutional type and how time is spent outside of class for faculty and department chairperson subgroups. Significance obtains for department chairpersons in the relationship of institutional type to time spent preparing instructional periods and tests, undertaking research, background reading, and working for employers other than the institution. For faculty, significance obtains for activities such as tutoring, research, and developing materials for the handicapped. Extending the analysis of relationships between institutional type and involvement to students, significance is observed in correlations linking institutional type to (a) student participation in activities such as athletic teams, band/chorus/dance, honorary clubs, student government, and (b) student perceptions of coursework as being more difficult than high school, good library facilities, and good equipment.

Second, evidence is found of a strong relationship between full-time student enrollment in occupational programs and time spent by department chairpersons outside of class directed to office hours, grades, personal counseling, career counseling, tutoring, research, extra-curricular activities, reading, and professional training. A similar pattern is noted for time spent by department chairpersons outside of class and tuition and private gifts and donations as a revenue source. Time spent preparing instructional periods and grading exhibits a significant correlation for department chairpersons for almost every institutional characteristics indicator with the exception of full-time students enrolled in liberal arts programs.

Third, contrary to the department chairperson group, comparatively little evidence of significance is available regarding the relationship between how faculty spend time outside of class and institutional characteristics--particularly full-time student enrollment. There is evidence of clustering and relationships involving tuition as a revenue source and faculty time devoted to tutoring, completing forms, grading tests, contacting employers, reading, and professional development. Also, evidence of clustering in correlations describing faculty perceptions of the institutional climate and specific institutional characteristics is found. For example, significant correlations are noted involving part-time students enrolled in occupational programs and faculty perceptions of school spirit of staff, student tardiness, "family" atmosphere of the institution, and cooperation between students and staff. Similar patterns are noticed between faculty perceptions of institutional climate and operating budget and private gifts and grants as a revenue source.

Students, the fourth subgroup in the analysis of the relationship between institutional characteristics and institutional involvement, show strong evidence of patterning in correlations among variables. Relationships are noted between (a) enrollment and care of facilities, perceptions of library and equipment, and student placement, and (b) operating budget and perceptions of course difficulty, care of facilities, and school spirit. A particularly strong series of relationships are noted between revenue sources (state aid, tuition, and private gifts) and student participation in particular activities (drama, hobby clubs, honorary clubs, campus newspaper) and perceptions of the campus climate (course difficulty, school spirit, quality of the library, and amount and quality of equipment).

Relationship of student population characteristics to educational process, instructional delivery, and institutional involvement variables. Student population characteristics are those attributes of the student population in survey institutions that may account for variation in subgroup perceptions of educational process, instructional delivery, and involvement in the institution. It is in this block of variables that differences in gender, race/ethnicity, English proficiency, and family income of the student population may account for differential approaches to instructional delivery and involvement in postsecondary education.

Observation of the correlations depicting relationships between student population characteristics (gender, race/ethnicity, English proficiency, and family income) and educational process variables for administrative official and department chairperson subgroups reveals discernible patterns among the variables. For both groups, association is noted between gender (male and female) and instructional goal priorities (preparation for further schooling, general career preparation, and placement in jobs). Although sparse evidence is available to attest to significance in the relationship between race/ethnicity and instructional goal priorities for administrative officials, a relationship does exist between family income ($10,000-15,000 and less than $10,000) and specific instructional goal priorities ("preparation for further schooling" and "general career preparation") for this subgroup. Department chairpersons exhibit association between percentage of the student population that is black and instructional goal priorities related to preparation for citizenship, development of basic skills, and development of problem-solving skills.

Turning to the remaining educational process variables--individuals and groups influential in establishing and revising curricula and determining instructional approaches and subgroup perceptions of factors influencing curriculum and instruction--mixed results are apparent with regard to association. Significance is noted for administrative officials in the relationship between family income ($10,000-15,000 and less than $10,000) and (a) the influence of business and industry representatives, JTPA/PIC, and state education administrative agencies in establishing and revising curricula and (b) the influence of state administrative agencies, business and industry representatives, and advisory boards in determining instructional approaches. Department chairpersons show a different pattern of results with gender (male and female) exhibiting association with state education agencies, JTPA/PIC, business and industry representatives, and advisory boards as influential organizations in determining curricula and instructional approaches. Similarly, significance is noted in the relationship of institutional administrators, department chairs, and instructors to specific income groups (above $25,000, $10,000-15,000 and less than $10,000) as influential individuals in the determination of instructional approaches.

Analysis of the relationship between student population characteristics and instructional delivery variables for administrative official, department chairperson, and faculty subgroups reveals a pattern of results similar to that exhibited for the educational process variables. The most commonly observed association between student characteristics and instructional delivery is in the family income and gender categories for the faculty subgroup and the gender and race/ethnicity categories for the department chairperson subgroup. Exhibit 3-7 presents an overview of significant correlations.

It is interesting to note clustering in the race/ethnicity categories for correlations descriptive of association with departmental chairperson perceptions of policy and procedural changes and special services available to students while clustering occurs for faculty in the gender and family income categories. It is also interesting to note the association between policy and procedure changes, special services available to students, and percentage of the student population that is black recorded for the department chairperson group. Finally, it is significant to note that there is evidence of association in the relationship between grading criteria and family income for the faculty subgroup.

The final analysis focuses on the relationship of student population characteristics and involvement in the institution among department chairperson, faculty, and student subgroups. With the exception of association between gender (primarily male) and time spent outside of class devoted to office hours, preparing instructional materials, counseling students about career plans and personal problems, tutoring, undertaking research, and extra-curricular activities for the faculty subgroup, there is virtually no evidence of clustering in correlations between the variables. The same can be said of student participation in campus activities. There is evidence of association between selected characteristics (gender and family income) and student assessment of campus climate (difficulty of coursework, school spirit of student body, quality of library facilities, and job placement capacity of the institution).

EXHIBIT 3-7

CORRELATIONS BETWEEN STUDENT POPULATION CHARACTERISTICS AND SELECTED INSTRUCTIONAL DELIVERY VARIABLES

	Student Population Characteristics												
	Gender		Race/Ethnicity						English Profic.	Family Income			
	M	F	American Indian	Asian	Black	Hisp.	White	Oth.		>25	15-25	10-15	<10
Policy and procedural changes													
-increased completion requirements					C		C						
-competency testing						C	C	C					
-entrance requirements					C		C						
-stiffened grading standards					C		C						
-basic skills emphasis					C		C	C					
-course requirements outside program					C	C	C						
-tougher instructor hiring standards						C	C						
-emphasis on retention													
Competency-based strategies													
-progress charts											F	F	F
-mastery charts	F	C/F	F						F		F		
-computer recording					C								
-standardized written tests									F		F		C
-standardized skills performance tests		C							F	C	F		C
-informal teacher judgments		F			F								
-teacher constructed written tests		C											
-teacher constructed skills performance tests		C										C	C
-judgments or ratings by employers		C				C							
Special services received by students													
-developmental reading		C	C		C		C						F
-developmental math			C		C		C			C		C	F
-pre-tech courses	F				C							C	C
-individualized counseling	F	F			C								
-tutoring	F	F			C		C				F	F/C	F

NOTE: C = Significant correlation (.05) department chairperson subgroup
F = Significant correlation (.05) faculty subgroup

Relationship of governance to educational process, instructional delivery, and institutional involvement variables. Governance variables refer to those attributes of the administrative and decision-making structure in postsecondary occupational education institutions that may account for variation in subgroup perceptions of educational process, instructional delivery, and institutional involvement variables. The general pattern of influences executed by the five variables in this category (board of trustee composition, board approval for decisions, involvement of parties in decision making, influence in establishing and revising curriculum, and influence in determining instructional approaches) when examined in relationship to the educational process variables is mixed. On the one hand, association is noted between particular governance variables (number of individuals on the college governing board) and educational process variables (instructional goal priorities related to training for specific occupations, general career preparation, and job placement) for administrative official and department chairperson subgroups. On the other hand, the patterns of association are sporadic. With the exception of relationships noted between (a) number of individuals on the governing board and assessment of influential individuals and organizations establishing and revising the curriculum and (b) board approval required for discontinuation of a course offering and influential individuals and organization in curriculum determination, there is no discernible pattern of relationships involving governance and educational process variables exhibited by department chairpersons.

A different pattern is reflected by the administrative official subgroup. Association is noted between the following variables:

- Number of individuals on the board of trustees and influential individuals and organizations in curriculum establishment and revision
- Number of board members elected by the public and influential individuals and organizations in curriculum establishment and revision
- Number of individuals on the college governing board and individuals and groups influential in determining instructional approaches
- Number of members elected by the public and individuals and groups influential in determining instructional approaches
- Board approval required for specific actions and state education administrative agencies as an influential organization in curriculum determination

- Board approval required for specific actions and the chief administrative official, governing board, JTPA/PIC, and state administrative agencies as influential organizations in determining instructional approaches
- Assessment of instructional goal priorities (prepare students to be competent consumers, provide training for occupational, and general career preparation) and the involvement of various parties in the governance of the institution
- Influence of state education administrative agencies and JTPA/PIC in curriculum determination and the involvement of various parties in the governance of the institution
- Influence of specific individuals and organizations in determining instructional approaches and the involvement of various parties in governance of the institution

Clustering for the relationship between governance variables and educational process variables for the administrative official subgroup is particularly pervasive. Association is noted for each of the governance variables--board composition, board approval, parties involved in governance, individuals and organizations influential in establishing and revising curricula, and individuals and organizations influential in determining instructional approaches. Compared to the other causal variables in this study, governance would appear to show the greatest evidence of patterning in association with educational process variables.

When the focus of analysis shifts to the relationship of governance variables to the instructional delivery variables, the evidence of patterning is not as strong as observed for the educational process variables. The incidence of significance for the department chairperson subgroup is limited to isolated cases in the relationship between parties involved in governance and competency-based strategies, special services available to students, and policies and procedures to instruction. Some evidence to indicate that association between board approval required for discontinuation of a course offering and instructional delivery variables such as competency-based strategies may provide important information to faculty and administrators regarding the effects of board roles in governance is found.

Analysis of data for the faculty subgroup reveals more evidence of clustering in the relationship between governance and educational process variables. For example, association is observed in a number of instances between board composition (total number of members, members appointed, and members from business and industry) and competency-based strategies, special services for students, types of questions used on tests, and how class time is spent. A powerful relationship is noted between (a) board composition and how class time is spent, (b) board approval and how class time is spent, and (c) involvement of parties in governance and how class time is spent. Additionally, there is evidence to suggest a measure of association between individualized learning activities and involvement of parties in governance as well as special tutorial services and involvement of parties in governance. Finally, there is considerable evidence to suggest a relationship between how class time is spent (daily maintenance activities, instruction, student practice of skills, and other activities) and individuals and organizations with actual influence in determining instructional approaches.

The final analysis concerns the relationship of governance variables to involvement in the institution for department chairperson, faculty, and student subgroups. There is scattered evidence of association for the department chairperson subgroup relative to these variables. The data suggest a relationship between the number of board members who are business representatives and hours spent outside of class devoted to preparing instructional periods, counseling students about personal problems and career plans, contacting employers, extra-curricular activities, and work with extra-institutional employers. Association is also noted between party involvement in specific areas of governance in the institution and hours spent outside of class devoted to particular tasks--particularly task work focused on tutoring, contacting employers, undertaking research, and work outside of the institution.

The evidence concerning association between the governance variables and faculty involvement in the institution is non-existent, if not meager. Examining the data, it is difficult to locate patterning or clustering in the correlations presented for each of the faculty involvement variables--hours spent outside of class devoted to specific tasks and assessment of the institutional climate. A similar pattern is noted for the student subgroup, although there is evidence to suggest a relationship between governance and assessment of the institutional climate. Specifically, association is noted between student assessment of the difficulty of coursework, library facilities, and equipment and (a) board composition, (b) board approval, (c) parties involved in governance, and (d) individuals and groups with actual influence on determination of curricula and instructional approaches.

Conclusion

The causal model estimated in this paper does account for association between variables which may have important implications for instructional delivery and involvement in postsecondary education. For extra-institution, institutional, student population, and governance variables alike, association is the result of a complex series of events that includes characteristics of the service region in which the institution is located; characteristics of the institution and the climate it extends to participants in instructional delivery; characteristics, attitudes, and perceptions of subgroups involved in teaching and learning; and characteristics of the administrative and decision-making structure of the institution that may affect instructional delivery and involvement.

Several variables in the model exert their influence in a comparable manner for administrative official, department chairperson, and faculty subgroups. The relationship of extra-institutional characteristics such as race and ethnicity of the institution's service region population to educational process characteristics such as instructional goal priorities is uniform across all subgroups. This may be evidence of alteration in instructional priorities to meet the educational needs of a service region population with particular characteristics. Similarly, there is uniformity across groups with respect to practices and procedures employed in instructional delivery (special services available to students) when viewed in association with race/ethnicity of the service region population. This commonality would be a logical outcome of widespread recognition among institutional subgroups of a need to provide special services and approaches to instructional delivery to population groups with special needs.

The type of institution contributes to the association between institutional characteristics and individuals and organizations influential in determining curricula and approaches to instruction. Likewise, institutional characteristics such as the operating budget and sources of revenue (local, state, federal, tuition, private gifts and donations, and other) evidence a measure of association with selected instructional delivery variables (competency-based strategies, special services for students, and how class time is spent).

The similarity of association between phenomena exerted by the first two sets of variables is also noted for student population characteristics. Association is observed between gender and instructional goal priorities as well as between family income and instructional delivery (competency-based strategies and special services received by students). However, it is in the relationship of governance to educational process variables that the greatest evidence of association is observed. Pervasive influence appears to exist for board composition, board approval functions, and involvement of parties in governance as factors that relate, in some way, to instructional goal priorities and individuals and organizations that have influence in determination of curricula and instructional approaches. The same cannot be said for measures of association between governance variables and instructional delivery and institutional involvement variables.

Even with sporadic evidence of association between the variables in each dimension of the causal model, it appears that there are relationships between each of the four causal variables and education process, instructional delivery, and institutional involvement. It seems reasonable to assume that the causal variables do have some influence on (a) instructional goal priorities, (b) the policies, procedures, and practices used to deliver instruction, and (c) involvement of subgroups in the institution.

It is similarly apparent that the nature and direction of influence cannot be determined through correlation analysis. Therefore, the task for research in the future is to explore in much greater depth the nature of association among forces involved in instructional delivery and involvement in the institution. In particular, analysis should be undertaken of the direction and extent of influence forthcoming from specific factors interacting with specific dimensions of instructional delivery and institutional involvement for different campus subgroups.

CHAPTER 4

AN EXAMINATION OF COMPETENCY-BASED EDUCATION

James O. Belcher

The 1980s have marked a period of intense national debate over the quality and priorities of education in the United States. Perhaps the only consensus is that improvements are necessary. Particularly worrisome to many employers has been an apparent decline in the quality of American manufactured goods and its companion ill of declining competitiveness on the international market. The perception is that improved, more efficient occupational instruction will produce better workers. Perhaps the most important response to the desire to improve instruction has been made by the proponents of competency-based education (CBE).

The emergence of competency-based education has been called the most significant development in vocational education in the United States since the passage of the Smith-Hughes Act of 1917 (Wonacott, K-1, 1986). The basic premise of CBE is quite appealing:

> Instead of time being the constant and learning the variable, the opposite situation is preferable--learning should be the constant and time the variable. (p. 6)

A moment's reflection upon the implications of such a radical proposal can help explain the controversy that it has generated. Responses to CBE among postsecondary administrators and instructors have ranged from assiduous implementation to half-hearted endorsement to open hostility. During the past several years, an array of products has been developed to aid in the implementation and management of competency-based programs. The promotional literature presents in glowing terms the impressive instructional, economic, and sociological benefits to be derived from CBE. CBE programs that function successfully have been presented as models for emulation. But there are features of CBE programs that have not delivered the promised benefits. The administrative disruptions created by the complex implementation process may of themselves be sufficient to deter an institution from converting to CBE. Likewise, for instructors who may hold suspicions about any pedagogical theory, the prospect of a radical change in instructional delivery and the attendant revamping of materials and procedures may severely prejudice any discussion of the topic. Amid the confusion it is apparent, as Wonacott (1986) has noted, that the situation has not been helped by the lack of an adequate research base. It is hoped that the data presented in this project report will to some extent alleviate that situation; if CBE does produce better results than traditional programs, then empirical data should offer considerable weight to the claims of its proponents. By the same token, if there are aspects of CBE that perform less well, they should be identified and, if possible, remedied.

What is Competency-Based Education?

It is understandable that an emerging theory of educational delivery such as CBE should engender a variety of duplicative and overlapping terms. Norton (1974) indicates that all of the following terms and acronyms apply to programs for secondary and postsecondary students:

- CBE--Competency-based education
- CBI--Competency-based instruction
- PBI--Performance-based instruction
- PBE--Performance-based education
- PBVE--Performance-based vocational education
- CBVE--Competency-based vocational education
- CBVI--Competency-based vocational instruction (p. 6)

The topic is made more nebulous by the inexactitude with which the various CBE-related terms tend to be used. In fact, a major problem in any examination of CBE lies in deciding which terms to use and what they will mean. This is more than simply an issue in semantics because whether or not a program may be identified as CBE depends largely upon the set of definitions used.

Some contributions to the CBE literature draw a careful distinction between education and training. Norton (1987, p. 1) identifies education as the larger, long term effort to prepare individuals with the "knowledge, skills, and attitudes needed for successful living with others, the environment, and culture plus the ability to deal effectively with change;" training is intended to serve the more specific purpose of providing individuals with "the knowledge, skills, and attitudes needed to obtain, maintain, and advance in a career or series of jobs; usually (focusing) on core or job-specific tasks." Similar views of the purpose of vocational training are promoted by other educational entities, (e.g., State of Florida 1980, p. 4) but they are by no means universally shared among postsecondary administrators and instructors, particularly at two- and four-year institutions.

Despite the wording, competency-based education is a matter of training. The commonly stated goal of CBE is to prepare each student to qualify for, obtain, and keep a particular job. The actual components needed to constitute a CBE program are a matter of opinion, although there is general agreement among curriculum developers that the components may be divided into essential elements and facilitating characteristics. The list in exhibit 4-1, compiled by Wonacott (1986), is representative. For variant listings of CBE program components, see Blank (1982), Sorg et al. (1984), and Norton (1985, LT-B-4 and LT-B-5). Whether any particular program qualifies as CBE or not, then, ultimately becomes a matter of self-designation--and one should be mindful that there is a certain amount of status to the claim that an institution's programs are competency based.

On the subject of installing a competency-based program, Wonacott (1986, p. 10) has noted that "trying to move, in one step, from a highly conventional program to one that includes all the essential elements and facilitating characteristics of CBE (may have) disastrous results." Aversions, reservations, and misgivings among faculty members can defeat a program regardless of its potential for success (Wonacott 1986). He recommends that a CBE program be implemented incrementally--one step at a time--over a period of three to five years. Therefore, it is quite possible that a given program of CBE is likely to be found in an inchoate state. During the data collection phase of this study, it was found that institutions purporting to offer CBE typically did not meet all of Wonacott's "essential elements." In fact, it appeared that some of those institutions had no intentions of ever doing so. Finally, a very large percentage of institutions in the sample reported the use of at least one or two elements of CBE.

The reality of the CBE issue, then, is that there are a great many postsecondary occupational programs around the country that have incorporated some of the features of CBE into their curricula; there is a gradation from "completely" CBE to "very little." This poses formidable problems for any analyses of competency-based education at the national level. However, indications are that more and more institutions will adopt elements of CBE into their instructional programs. It would certainly be prudent at this stage in the nationwide implementation of CBE programs to examine their efficacy, both to determine whether they are actually capable of rendering the improved results so ardently claimed by their proponents and to identify and remedy shortcomings or other problem areas.

A caveat from Blank (1982, p. 23) is worth noting here. Earlier studies in the literature have compared "conventional" and "individualized" methods and found "no significant difference in learning." Blank found that those programs identified as individualized typically exhibited "a less than carefully designed and implemented approach to the individualized method." He concluded that "the potential benefits of competency-based training will not be realized by simply writing objectives and

EXHIBIT 4-1

ESSENTIAL AND FACILITATING ELEMENTS OF CBE

ESSENTIAL ELEMENTS

- Competencies to be achieved are rigorously identified, verified, and made public in advance of instruction.
- The instructional program provides for the individual development and evaluation of each of the competencies specified.
- Assessment of the competency takes the student's knowledge and attitudes into account but requires actual performance of the competency as the primary source of evidence.
- Criteria to be used in assessing achievement and the conditions under which achievement will be assessed are explicitly stated and made public in advance.
- Students progress through the instructional program, at their own best rate, by demonstrating the attainment of specified competencies.

FACILITATING CHARACTERISTICS OF CBE--Instructional

- The instructional materials used are keyed to the competencies to be achieved.
- Environments that duplicate or simulate the work place are available to students during competency development.
- Basic knowledge or background theory is learned as it is needed to support competency development.
- Students are informed about the traits and attitudes important to workers in the occupation and are periodically evaluated regarding their attainment.
- Each student is given continual and detailed feedback on competency development.
- A variety of learning styles and teaching strategies is provided for.
- Students with appropriate prerequisite skills and knowledge may bypass instruction on competencies already attained.

EXHIBIT 4-1--Continued

FACILITATING CHARACTERISTICS OF CBE--Administrative

- Program completion is based on satisfactory achievement of all specified competencies.
- Students can enter and exit from the program at different time.
- Individual student records are maintained and reflect student progress at any given point in time.
- Materials, space, and equipment are available when needed by students and instructors.
- The record-keeping system permits student transfer into and out of the program without requiring duplication of instruction on competencies already achieved.
- The requirement of a designated number of hours of instruction is removed from the criteria for program completion.
- Records of competency attainment are provided to students and prospective employers.
- Student grades, if used, reflect the level of competency achievement attained.
- Credit, if awarded, is given for competencies achieved as a result of instruction and for demonstration of previously acquired competencies.
- Student fees are individually assessed and are based on the time actually spent in the program and the instructional resources used.

SOURCE: Wonacott 1986, pp. 7-9.

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video-taping lectures or using workbooks. It must be a total systematic effort utilizing all of the critical elements of a competency-based program."

For the purposes of this study, it was determined that the best strategy would be to approach CBE as an array of components. Postsecondary occupational programs were categorized as more, less, or not competency-based depending upon the number of essential or facilitating elements that they reported. These programs were then separated from the rest of the sample for comparison.

CBE: The Approach/Avoidance Factors

The basic premise of CBE, as stated earlier, is that learning should be the constant and time the variable. The appeal of such elegant logic is great, indeed. If learning is the constant, then it follows that "almost all learners can learn equally well if they receive the kind of instruction they need" (Wonacott, p. 6). Or, if time is the variable, then the beginning and ending dates of instruction are variable, and so on into the corollaries of CBE.

In the real world, however, elegant logic alone rarely accomplishes very much. The dislocations involved in phasing in a new teaching mode with new instructional materials and new evaluation procedures are considerable, if not daunting. A number of the proponents of CBE have anticipated many of these problems and have formulated answers to questions that may be raised about CBE as part of their effort to facilitate the installation of viable programs. A look at some of those formulations will give the reader an idea of the acknowledged strengths--and, by their notable absence, the weaknesses--of competency-based programs. The wording of these statements should also provide some appreciation for the partisanship espoused by the promoters of CBE.

Blank (1982) offers seven principles of CBE in which he emphasizes student acquisition of skills and de-emphasizes "student differences in levels of mastery of a task (that) are caused primarily by errors in the training environment" (p. 14). He follows with a debunking of 15 competency-based myths, which are dismissed as "Ridiculous!," "Nothing could be further from the truth," "Absolutely false," or "Quite the opposite is true!" (pp. 16-18.) Duenk (1982), in his comparison of traditional vocational instruction with CBE, embellishes the CBE attributes with wording that is as attractive as the descriptions of traditional instruction are pejorative. For example, the lectures and demonstrations of traditional education are referred to as a "trap;" student interest level is high in CBE, it is asserted, because students may select from a variety of available learning activities, but students in traditional programs exhibit low interest because of their curtailed choices; and students in CBE programs "learn to perform or to do something" whereas students in traditional programs "often learn about something" (p. 2). The point here is that although the CBE movement is supported by persuasive logic and an ardent rhetoric, it has not enjoyed very much affirmation in the way of nationally valid statistical analysis.

The avoidance factors regarding CBE stem from two main sources. The first is the absence of empirical proof that CBE works. The writer of this paper has observed CBE programs that appear to be operating superbly--as well as CBE programs whose outcomes appear disappointing. The second factor is the intuitive knowledge that there is nothing magical about correct logic and well-developed plans. In reality, the implementation of CBE, as with the best of plans, may be impaired by an ineffectual administration or instructional staff, or stifled by negative local cultural influences, retarded by a sluggish economy, or hindered by a lack of productive contact with employers. These factors can account for much of the professional reluctance to implement CBE programs. It would be useful at this point to consider some of the claims made in support of CBE and place them in the context of a less-than-well-planned world.

Costs. Blank (1982, p. 18) asserts that competency-based programs are less expensive than conventional programs "due to lower dropout rates, lower failure rates, higher average daily attendance, (and) students being allowed to exit early and then being replaced by new students . . ." One cost-saving feature of competency-based programs identified by administrators and instructors during the data collection phase of this project was the reduced need for instructional equipment. Since an entire class of students does not simultaneously commence instruction on any one piece of equipment, it is not necessary to purchase one of everything for everyone in the program to use at the same time. But data collected for this project suggest that there is evidence of CBE programs having to cut costs in the area of equipment and facilities.

Goals. The goal of CBE, according to Blank (1982, p. 34), "is to meet the employment goals of each individual trainee." Specifically, this means employment for the student. Features of CBE such as open entry/open exit and compartmentalized programs were developed expressly to help meet students' needs while causing minimal disruption in the attainment or continuation of employment goals. The CBE literature is unequivocal about this: "The main purpose of vocational training is to provide every student with the skills and knowledge (s)he needs to obtain and keep a specific job" (State of Florida 1980, p. 4); the goal of competency-based training is "preparation of the trainee for work" (Norton 1987, p. 4); "It makes no difference how much each student learns, just so each is employable in a job or job category which meets their interests, abilities, and needs" (Oen 1982, p. iii).

The competencies themselves that are acquired by trainees, writes Blank (p. 58), are "those worthy accomplishments that make the employee valuable to the employer and that makes the employer valuable to the customer or consumer." This would lead one to expect a higher degree of employer satisfaction with the alumni of competency-based programs.

Student attitudes. During the course of the data collection for this project, a number of postsecondary students remarked in interviews that the freedom of self-paced instruction meant that they would not be held back by slower students or intimidated by more advanced students. This was cited as a particular advantage in programs that combined adults with secondary students. A number of students in the "nontraditional" category--older, handicapped, single parents, reentry women, etc.--felt that open entry/open exit was an essential condition for their attendance in a program. It is noteworthy that a great many of these students frankly expressed no intentions of completing a formal program; they had come into the program for the short-term purpose of acquiring one or a few specific skills, often with the support and encouragement of their employers.

Individualized/personalized instruction. According to Sorg (1986, p. 18), individualized instruction means that "students may take any number of routes to reach the same goal: achieving an occupational competency. . . does not imply simply securing a learning package and working in isolation." The term "personalized instruction" does not refer so much to the mode of learning, writes Sorg, as it does to a student's own goals. The issue here is whether the benefits of individualized instruction--being responsive to the varying needs of each student--are outweighed by the drawbacks, the difficulty in using lecture techniques, and persistent complaints that some students feel isolated or abandoned, as was reported during some interviews. Sorg insists that:

> there may be many occasions when [large-group instruction] is beneficial . . . the idea of having a small number of students . . . work together should not be neglected in CBE programs. (p. 18)

Teacher control of learning. The Curriculum Delivery System Project of Florida State University (1980) notes the worry of some teachers:

> that giving students more responsibility [for managing their rate of progress] will result in a loss of teacher control . . . the teacher has, after all, designed the system or environment in which students must operate; without the teacher there to manage the overall system, it would soon cease to function. (p. xii)

The concern persists, nevertheless, that the role of instructor in self-paced instruction will shrink to that of tutor or monitor and perhaps even be obviated altogether. Waul (1987) addresses instructors' apprehensions that self-paced learning will lead to atrophy of student interest and motivation; see his description of several strategems for dealing with this issue in the context of a 10-day workshop for administrators and teachers in central Oklahoma.

Administrative duties. Tangential to teacher control of the learning environment are administrative duties such as student evaluations and other records keeping--the paperwork. A prevalent apprehension among instructors whose administration is considering transition to CBE is that requirements for paperwork will expand beyond anyone's ability to deliver (Sorg 1984).

Basic skills; special needs. There is some concern that matters such as basic skills instruction and other instruction required by special needs students will be incompatible with what is available in competency-based programs. The features of CBE that are designed to facilitate the training of students who have special needs ought to encourage the enrollment of such individuals in CBE programs. However, the question remains whether CBE programs in fact do attract and retain more special needs students than do conventional programs.

Findings of the Postsecondary Occupational Education Delivery Study

Carrying out an assessment of competency-based education is more involved than simply comparing responses from the CBE programs with those from non-CBE, or traditional programs. As was discussed earlier, competency-based education is an array of instructional materials, devices, and techniques. There is no universally accepted statement defining CBE. Nor is there any official or unofficial roster of programs or schools designated as offering competency-based education. Predictably, the question is further complicated by the "bandwagon effect" of institutions that may be tempted to use the term "competency-based education" prematurely. The solution to the problem of determining what to compare for analysis lay in determining an objective means to identify those schools in the sample that qualify for the designation of having competency-based programs.

To accomplish this, a rating system was set up by which the responses for each department or program chairperson could be scored, points being given according to the extent to which the chairpersons indicated the existence of CBE features in their program. Exhibit 4-2 presents the portions of the questionnaire that were used in the rating system. Points were given according to the following schedule:

Q.	16	Response 1	0 points
		Response 2	1 point
		Response 3	2 points
		Response 4	10 points
Q.	17(b)	Yes	1 point
	(c)	Yes	1 point
	(d)	Yes	1 point
	(e)	Yes	1 point
	(f)	Yes	1 point
	(g)	Yes	1 point
	(h)	Yes	1 point
	(i)	Yes	1 point
	(j)	Yes	1 point
	(k)	Yes	1 point
Q.	29(b)	Yes	10 points

EXHIBIT 4-2

CHAIRPERSON QUESTIONNAIRE: SELECTED QUESTIONS

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16. Are individualized learning activities and experiences an integral part of your program:

[1] No
[2] Yes, when dealing with learning basic concepts/theory
[3] Yes, when working in shop/lab on job skill development practice
[4] Yes, all segments of program

17. Which of the following competency-based strategies are used in your program?

(a) Our particular program is not competency-based and we do not use these competency-based strategies [9] (Go to item 18)

		Yes	No
(b)	Progress charts	[1]	[2]
(c)	Mastery charts	[1]	[2]
(d)	Computer recording	[1]	[2]
(e)	Standardized written tests	[1]	[2]
(f)	Standardized skills performance tests	[1]	[2]
(g)	Informal teacher judgments	[1]	[2]
(h)	Teacher constructed written tests	[1]	[2]
(i)	Teacher constructed skills peformance tests	[1]	[2]
(j)	Judgments or ratings by employers	[1]	[2]
(k)	Other (Specify: ______________)	[1]	[2]

29. Over the past two years, has your department/program undertaken any of the following activities or policy changes?

		Yes	No
a)	Increased completion requirements	[1]	[2]
b)	Implemented competency testing for completion	[1]	[2]
c)	Increased entrance requirements for program	[1]	[2]
d)	Stiffened grading standards	[1]	[2]
e)	Explicitly decided to increase emphasis on basic skills	[1]	[2]
f)	Added requirements for courses outside your department/program	[1]	[2]
g)	Stiffened hiring standards for instructors/faculty	[1]	[2]
h)	Placed special emphasis on retention of special needs students	[1]	[2]

Institutional programs that scored zero to nine points form the largest group; the questionnaires from 321 chairpersons were placed ioto this low/non-CBE group. The programs that scored 10 to 19 points were placed into the mid-range group of 218 programs. The 66 programs that scored 20 to 29 points were placed into the competency-based education group. It is important to keep in mind that whenever possible, two programs were surveyed at each institution. In several instances, one CBE program at a school may have scored higher or lower than the other program--which may have been placed into the mid-range or low/non-CBE group.

Another factor that limited the number of programs in the CBE group is the relative inflexibility of four-year institutions in matters of duration of courses, student entry into a program, and grading. To be sure, a few four-year colleges and universities have adopted competency-based instruction in some occupational courses, but the reconciliation of open entry/open exit versus traditional quarters or semesters, or the determination of credits to be awarded upon the acquisition of a series of prgressive competencies earned at a four-year school have proved to be major stumbling blocks to the adoption of CBE in those schools. Of the 66 programs that scored in the "CBE range" (20+ points), four were located at four-year institutions. Of the others, 28 were located at type 1 institutions (degree-granting community and junior colleges) and 32 were located at type 2 institutions (technical institutes). The result is that the selection process yielded two distinct groups--non-CBE and CBE programs--the questionnaire responses from which might be compared and contrasted. The responses from the mid-range of 218 programs have been excluded from the analysis.

In the comparison of responses form the CBE and non-CBE (or traditional educational program) groups, the following topics have been addressed: (1) program completion, (2) educational goals, (3) factors that influence the delivery of instruction, (4) special services, (5) administrative/policy changes, and (6) factors that influence salary determination.

Program Completion

One of the central goals of competency-based instruction is to better accommodate the individual needs of students, particularly in an effort to raise rates of student completion of programs. In order to compare estimated completion rates, program chairpersons were asked to write in a number in response to Question 11: "If 100 students began your program, how many would you estimate to--

a) Complete the program in the minimal possible time?

b) Complete the program, but in longer than the minimal possible time?

c) Leave the program at your initiative (Failing grades, advised to leave, etc.)?

d) Leave the program for other reasons (Took a job, transferred to another program or institution, etc.)?

Summary data from the responses to part a) of this question are provided in exhibit 4-3.

EXHIBIT 4-3

EXPECTED COMPLETION RATES IN MINIMAL POSSIBLE TIME

	Percentage of Students Expected by Chairpersons to Complete in Minimal Time			
Type of Program	0-20%	21-50%	51-70%	71-100%
CBE	23%	26	21	30
Traditional	32%	28	20	20

It does not come as a surprise that 30 percent of the chairpersons in CBE programs expect most or all (71 to 100 percent) of students to finish in minimal time. Only 20 percent of the chairs in traditional programs have the same expectation; in a neat reversal, 32 percent of them think that only 20 percent or fewer students will finish in minimal time. One should keep in mind that these data do not represent documented outcomes, but rather perceptions.

These data seem to support the contention that CBE does facilitate the early completion of programs by students. Features such as self-paced learning and open entry/open exit probably play an important role. The benefits derived from early completion would include a more efficient expenditure of time and money by students; there is also evidence, presented later in this paper, that these facilitating features more successfully accommodate special needs students, thereby allowing them to finish a program or even finish early.

Exhibit 4-4 provides summary data for part b) of question 11, i.e., delayed completion. As in the previous question, respondents could select any number from 1 to 100 in their answers. Again, the figures show a significant difference between the expectations of chairpersons in CBE programs and those in traditional programs. The percentage categories were much lower than for part a), which suggests that chairpersons in general do not expect large numbers of students to have longer than minimal time completions. Still, 32 percent of the chairpersons in competency-based programs thought that 16 percent or more of their students would take longer than minimal time to finish their

EXHIBIT 4-4

EXPECTED DELAYED COMPLETION RATES

Type of Program	Percentage of Students Expected by Chairpersons to Have Delayed Completion			
	0-5%	6-15%	16-25%	26+%
CBE	29%	39	18	14
Traditional	26%	30	20	24

As in the previous question, respondents could select any number from 1 to 100 in their answers. Again, the figures show a significant difference between the expectations of chairpersons in CBE programs and those in traditional programs. The percentage categories were much lower than for part a), which suggests that chairpersons in general do not expect large numbers of students to have longer than minimal time completions. Still, 32 percent of the chairpersons in competency-based programs thought that 16 percent or more of their students would take longer than minimal time to finish their programs. This is compared to 44 pecent of the chairs in traditional programs who think that 16 percent or more of their students will take longer to finish. These data may be viewed as a mirror image corroboration of the responses to part a), that chairpersons in competency-based programs expect their students to finish earlier than students do in traditional programs.

Exhibit 4-5 provides summary data about noncompletion rates for reasons that are under program control. Responses from the chairpersons of traditional programs were evenly spread over the four response categories. Responses from the CBE were not. Only 15 percent of the chairpersons expected to initiate leaving for fewer than four percent of students, whereas 42 percent of them expected to ask between four and six percent of students to leave.

EXHIBIT 4-5

EXPECTED NONCOMPLETION RATES DUE TO PROGRAM INITIATIVE

Type of Program	Percentage of Students Expected to Leave at Chairperson's Initiative			
	0-3%	4-6%	7-13%	14+%
CBE	15%	42	21	21
Traditional	26%	22	25	26

Educational Goals

The first section of this paper presented an overview of the generally accepted constituents of a competency-based program. It might seem reasonable to assume that although the means may differ, the goals of competency-based and traditional occupational education coincide. However, the data collected for this survey indicate that there are significant differences between the two groups of respondents in the value they place upon attaining certain goals. In question 23, chairpersons were asked to respond with "Very Important," "Important," "Not Too Important," or "Not at All Important" to each of the following goals for their departments:

a) Prepare students to be good citizens

b) Develop basic skills

c) Develop students' abilities to solve problems and think critically

d) Prepare students to be competent consumers

e) Prepare students for further schooling

f) Provide in-school training for specific occupations

g) Give students a broad, general career preparation background

Exhibit 4-6 compares summary data for the CBE and traditional programs. The results are striking here. The competency-based program chairpersons by a two-to-one ratio indicated that "preparing students to become good citizens" is "Very Important" by a wide margin, 36 percent to 19 percent. The same ratio in reverse holds for the "Not Too Important" choice. The literature does not claim that the completers of competency-based programs shall become better citizens, yet the data seem to indicate that good citizenship is a widespread emphasis among the program chairpersons. In accounting for these results, one may suppose that the reasoning goes as follows: efficiently and effectively trained students make better employees, who in turn make better citizens.

As might be expected, other goals from the list provided above were thought to be more important than preparation for citizenship. In exhibit 4-7, responses to the development of basic skills as a goal are summarized. If there were a few chairpersons who thought that developing citizenship was unimportant, fewer yet felt that way about this "high visibility" issue of developing students' basic skills. Virtually all respondents indicated that they attached some degree of importance to basic skills. Where they chose to place their emphasis, however, was telling, in that three-quarters of the chairs of

EXHIBIT 4-6

EMPHASIS ON PREPARING GOOD CITIZENS

Type of Program	Degree of Importance			
	Very Important	Important	Not too Important	Not at all
Competency-Based	36%	52	12	2
Traditional	19%	57	23	2

EXHIBIT 4-7

EMPHASIS ON DEVELOPING BASIC SKILLS

Type of Program	Degree of Importance			
	Very Important	Important	Not too Important	Not at all
Competency-Based	74%	24	2	0
Traditional	64%	32	4	0

competency-based programs marked "Very Important," whereas only two-thirds of the chairs from traditional programs did so.

One may hypothesize that one of the components of competency-based education--the progressive, incremental nature of the instruction--is responsible for this heightened emphasis on basic skills. If predetermined and explicit competencies are to be gained during the term of instruction, then students must begin with a standardized foundation of skills. Other data collected for this survey indicate a greater emphasis on job placement at competency-based programs. From this, it would follow that students who have proceeded through their acquisition of competencies from a solid grounding in basic reading and computational skills ought to become more employable job candidates.

Part d) of question 23 asked whether it were important for occupational programs to prepare students to become "competent consumers." Interestingly, the chairpersons from competency-based programs were twice as likely to answer that it was "Very Important" to do so--17 percent of them--versus 7 percent of their counterparts in traditional programs. Competent consumerism is not discussed in the professional literature of CBE. Proponents of CBE do prefer to describe their method as a step forward in the evolution of education theory, leaving one to wonder if that involves a greater interest in consumer progressiveness.

EXHIBIT 4-8

IMPORTANCE OF IN-SCHOOL SPECIFIC OCCUPATIONAL TRAINING

Type of Program	Degree of Importance			
	Very Important	Important	Not too Important	Not at all
Competency-Based	76%	23	1	0
Traditional	57%	30	11	2

Respondents from both competency-based and traditional programs indicated that providing inschool, specific occupational training was important, 76 percent of the CBE programs seeing it as "Very Important" and 57 percent of the traditional programs agreeing. These data fit in with the heightened emphasis on employability and placement that seems to characterize competency-based programs.

Exhibit 4-9 presents data concerning the goal of placing students after program completion. This is one of the most telling results of the examination of competency-based education in postsecondary schools. Roughly half again as many chairpersons from competency-based programs indicated that student placement was "Very Important," leaving little doubt about the difference in emphases between the two instructional approaches. At the other end of the chart, one sees that a minimal 5 percent of the respondents from CBE answered "Not Too Important," compared with 16 percent in traditional programs. At a time when there exists no generalized national policy directing student placement in programs that, after all, exist to provide occupational instruction, it is to the credit of CBE that there is a heightened emphasis on finding jobs for students who have paid to learn job skills. What is not known is the degree of effectiveness of placement for all postsecondary students; accurate placement data are difficult to collect because of the lack of consensus in terminology and objectives, widely varying responsibilities (or lack thereof) for reporting outcomes, difficulty or absence of conducting follow-up, the reality of large numbers of students whose educational goals never included completing their program, and so forth. Anecdotal data gathered during interviews suggests that, very often, it is the instructor who voluntarily accepts sole responsibility for placement activities. This spirit of responsibility appears to be less an inherent feature of CBE than it is another aspect of the sense that persons involved in CBE are simply more progressive toward the goal of employment.

EXHIBIT 4-9

JOB PLACEMENT FOR STUDENTS

Type of Program	Degree of Importance			
	Very Important	Important	Not too Important	Not at all
Competency-Based	69%	26	5	0
Traditional	46%	36	16	2

There was less disagreement among chairpersons in the two programs over the remaining parts of this question. Ninety-seven percent of all respondents rated as "Very Important" or "Important" developing students' abilities to solve problems and think critically. The chairpersons in competency-based programs were slightly more likely to select "Very Important," but this was not a statistically significant difference.

On the matter of preparing students for further schooling, the traditional program chairs indicated that this was slightly more of a priority than did the CBE schools (49 percent versus 44 percent). In light of the evidence cited that competency-based programs emphasize placement in employment after training, it is reasonable to find less than average emphasis on placement into further education.

Chairpersons in traditional programs were just a bit more likely to indicate that giving students a broad, general career preparation background was either "Very Important" or "Important" than was the competency-based group. Furthermore, the competency-based chairs selected "Not Too Important" by two-to-one over traditional chairs (29 percent versus 15 percent). The implication seems to be that CBE is somewhat more narrowly focused upon training students and then placing them into jobs.

Factors Influencing Curriculum and Instruction

The survey data as discussed thus far provide evidence that CBE is indeed meeting many of the claims of its proponents. In the area of curriculum and instruction, however, responses from chairpersons point to one area where the real world performance of CBE has fallen behind that of traditional programs. Question 24 asks, "Do you agree or disagree with each of the following factors in terms of their influence on curriculum and instruction at your institution?" Respondents were asked to indicate whether they "strongly disagree," "disagree," "have no opinion," "agree," or "strongly agree." There is little significant variation among the

EXHIBIT 4-10

INSTRUCTION RESTRICTED BY EQUIPMENT/FACILITIES

Type of Program	Degree of Importance				
	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
Competency-Based	12%	17	6	35	30
Traditional	12%	29	5	38	16

chairpersons' responses except for two areas that may indicate shortcomings in translating CBE from ideal to reality.

Part c) of question 24 asked chairpersons to indicate whether or not they agreed that "Outdated facilities or equipment restrict curriculum offerings or instructional content." Response data are given in exhibit 4-10. The fact that nearly a third of the chairpersons from competency-based programs "strongly agree" with the statement indicates that there exists a considerable problem in maintaining an up-to-date instructional environment there; only half as many (16 percent) respondents from traditional programs strongly agreed. Further evidence emerges among those chairpersons who disagreed with the statement; 29 percent of those in traditional programs did not agree that instruction was hindered by outdated equipment and facilities, whereas only 17 percent of chairs in competency-based programs disagreed.

The implications of these data are important to any discussion of CBE. One of the recurring criticisms of CBE is that it is expensive to install and operate. Proponents argue that it is not really more expensive, citing the cost-saving factors mentioned earlier in this paper. Since salaries and maintenance costs are fixed, and start-up costs for a competency-based program do involve additional funds to be spent for such items as the DACUM process, design of new syllabi and examinations, redesigning administrative procedures, and development of other teaching materials such as computerized and videotaped instructional packages, then it would appear that program administrators are installing their competency-based programs at the expense of the currentness of facilities and equipment.

A second (and possibly noncommittant) explanation for the CBE chairpersons' reservations about the currentness of their equipment may be a product of the heightened emphasis on placement that characterizes CBE. Successful placement would undoubtedly be facilitated by training that included the most current equipment available. Anything less than that could contribute to a perception that placement will suffer because equipment and facilities are not the very latest.

In exhibit 4-11, data are presented concerning the statement that student discipline in the institution restricts instruction. The chairpersons in competency-based programs were almost twice as likely to agree or strongly agree with this statement (28 percent) as were the traditional program respondents (15 percent). In contrast, 76 percent of the chairpersons in traditional programs disagreed with the statement, compared to 60 percent of the competency-based program chairs who disagreed. These figures indicate that there is a greater perception of discipline as a problem in the CBE programs. It seems relevant here to note that one of the frequently stated aversions to implementing CBE is that instructors fear the loss of control in the classroom. Proponents of CBE have argued that the traditional lecture contributes to student boredom, which engenders discipline problems; they promote CBE as a means to involve students more directly with the instructor in one-to-one situations, and this personal attention is supposed to reduce discipline problems.

EXHIBIT 4-11

INSTRUCTION RESTRICTED BY STUDENT DISCIPLINE

	Agreement/Disagreement with Statement				
Type of Program	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
Competency-Based	23%	38	11	24	4
Traditional	35%	41	9	14	1

The CBE-related alternative to the lecture--self-paced, individualized instruction--in practice means that students spend most of their instructional time unsupervised. Therefore, it would appear that many instructors' fears of losing control in the classroom under CBE are indeed justifiable. It is probable that proponents of CBE have been simplistic in citing the lecture as a detriment to effective instruction. The preference is to portray the lecture as inherently boring and inefficient. Since self-paced instruction allows students to accept responsibility for their own expenditure of instructional time, and, theoretically, the instructor is available when needed, student morale is boosted and discipline problems should wither away. However, anecdotal data collected on site visits for this project include statements from students in competency-based programs who strongly wished that lectures could be used in class. It seemed very wasteful to them for the instructor to spend considerable amounts of class time apart from the one-on-one sessions in order to present theoretical or generalizable information individually to each student, one at a time. Several comments were received along the lines of, "If she/he could just get us all together, she/he could get the information to us in one hour instead of in 16 hours (the number of students in the course)."

Special Services for Students

Question 28 of the survey asked "What percentage of your students receive the following special services?": a) developmental instruction, basic reading, b) developmental instruction, basic math, c) pre-tech courses, d) more individualized and intensive counseling and follow-through from departmental staff, e) special tutorial and/or related types of assistance (e.g., peer tutoring). The responses from the chairpersons in CBE programs differed significantly from the traditional programs in two instances--individualized counseling and special tutorial. Data for these categories are given in exhibit 4-12 and 4-13, respectively.

EXHIBIT 4-12

STUDENTS RECEIVING INDIVIDUALIZED COUNSELING

	Estimated Percentage of Student Receiving Individualized Counseling		
Type of Program	1 - 5%	6 - 25%	26+%
Competency-Based	11%	65	24
Traditional	17%	71	12

EXHIBIT 4-13

STUDENTS RECEIVING SPECIAL TUTORIAL ASSISTANCE

	Estimated Percentage of Student Receiving Special Tutorial Assistance		
Type of Program	1 - 5%	6 - 25%	26+%
Competency-Based	17%	67	16
Traditional	22%	71	7

The respondents from competency-based programs were twice as likely as those from traditional programs to estimate that a quarter or more of their students will receive more individualized counseling and follow through. This is not surprising and is quite in keeping with the particular benefits of individualized instruction as made available in competency-based programs. At the cost of class lectures, the instructor acquires time to spend with students in one-to-one situations. The opportunity to discuss career-related or personal matters in addition to instructional matters would occur naturally in these situations.

There was not a great deal of difference in the area of special tutorial assistance between the responses from competency-based and traditional chairs. However, the chairpersons in competency-based programs were somewhat more likely to estimate that more than 25 percent of the students receive special tutorial assistance; 16 percent of them made that estimate, compared with only 7 percent of the chairs from traditional programs. One interesting reflection about these data is that there is not much more peer tutoring taking place in the CBE programs. In fact, these responses suggest that students in CBE programs are indeed more isolated than in traditional programs--a claim often leveled by critics of CBE. Students in lecture and seminar situations have the opportunity to interact, trade views, or offer guidance; they may even be prompted to do so by the instructor. The sacrifice of class lectures eliminates the opportunities for seminar-type interactions. Since students in competency-based classes lose this opportunity for assistance from peers, they may feel more autonomous, if not isolated.

Changes in Administration/Policy

Question 29 asked chairpersons "Over the past two years, has your department/program undertaken any of the following activities." In four of the eight sub-parts to this question, responses from chairpersons in competency-based programs differed significantly from their counterparts in traditional programs. Those sub-parts are a) increased completion requirements, d) stiffened grading standards, e) explicitly decided to increase emphasis on basic skills, and h) placed special emphasis on retention of special needs students.

The chairpersons in competency-based programs were far more likely to answer "yes" to the increased completion requirements part of question 29 than were the other chairpersons, by a rate of 61 percent versus 37 percent (see exhibit 4-14). The most likely explanation is that the implementation of CBE provides ample opportunity to also implement any other completion requirements or other curricular changes that may have been under consideration. It is also possible that the implementation of CBE features into a program may in and of itself be perceived as a "program improvement," more so perhaps among program chairpersons than among instructors.

Exhibit 4-15 examines response to the grading standards policy. The chairpersons in competency-based programs were clearly more likely to answer "yes" than were the traditional chairs--40 percent in CBE, 28 percent in traditional programs. Although the deviations are less striking here than in part a), it is similarly probably that the features associated with implementing a competency-based program may in and of themselves be perceived to amount to a stiffening of grading standards. It is also possible that the emphasis on placement in CBE has led to the raising of some program completion standards.

EXHIBIT 4-14

COMPLETION REQUIREMENTS INCREASED

	Have Completion Requirements Been Raised in the Past Two Years?	
Type of Program	Yes	No
Competency-Based	61%	39
Traditional	37%	63

EXHIBIT 4-15

GRADING STANDARDS STIFFENED

	Have Grading Standards Been Stiffened in the Past Two Years?	
Type of Program	Yes	No
Competency-Based	40%	60
Traditional	28%	72

The data in exhibit 4-16 show a large difference in the perception of the value of emphasizing students' basic skills at competency-based programs and traditional programs; with 67 percent of the chairpersons in competency-based programs answering "yes" to part e) of the question; the 41 percent of the chairpersons in traditional programs who answered "yes" are quite small in comparison. As noted earlier, the emphasis on successful student placement into jobs that characterizes CBE seems to have led to the conclusion that possession of basic verbal, computational, and employability skills is fundamental to the desired outcome for students. These responses from traditional programs may cause one to wonder whether occupational instruction tends to be seen by many in those programs as ends in themselves,

EXHIBIT 4-16

INCREASED EMPHASIS ON BASIC SKILLS

Type of Program	Has the Emphasis on Basic Skills Been Explicitly Increased in the Past Two Years?	
	Yes	No
Competency-Based	67%	33
Traditional	41%	59

or "self-actualization activities." As in the other parts of this question, the implementation of CBE features provides the opportunity to readjust other instructional emphases at the institution, something particularly imperative in view of the national concern presently regarding students' basic skills.

Finally, exhibit 4-17 reports on increased emphases on retention of special needs students. The results here are interesting in regards to the response from the chairpersons of traditional programs, who answered "no" 60 percent of the time; the response from competency-based programs was evenly divided. Nevertheless, the greater emphasis on retaining (e.g., by accommodating) special needs students in CBE reinforces the perception that competency-based programs are more progressive, in that they attempt to respond to current issues in occupational education. It is likely that some of the specific features of CBE--open entry/open exit and self-paced instruction--provide an important margin of tolerance for special needs students.

EXHIBIT 4-17

EMPHASIZING RETENTION OF SPECIAL NEEDS STUDENTS

Type of Program	Has there been Increased Emphasis on Retention of Special Needs Students?	
	Yes	No
Competency-Based	52%	48
Traditional	40%	60

In regards to the other portions of this question, it can be noted that hiring standards have been elevated in a third of the competency-based programs over the past two years, but in only a quarter of the traditional programs. It is unclear what the reasons are for this rise in hiring standards, but it can hardly help to mollify the uneasiness of instructors faced with the choice of whether or not to cooperate in installation of CBE.

Factors that Influence Salary Determinations

Question 18 asked chairpersons to respond to various statements regarding influences that affect the determination of faculty salaries. Although this is not a central issue in either the implementation or the maintenance of a competency-based program, it is interesting to find that in three areas, responses from chairpersons in competency-based programs differed from their counterparts in traditional programs. The areas were part a) quality of teaching; part d) collective bargaining agreements; and part e) interaction with employers (exhibits 4-18 through 4-20).

EXHIBIT 4-18

SALARY DETERMINATIONS INFLUENCED BY QUALITY OF TEACHING

	To What Extent does Quality of Teaching Influence Salary Determinations?			
Type of Program	Great Influence	Average	Little Influence	Not Applicable
Competency-Based	21%	24	21	34
Traditional	22%	27	15	36

The responses from chairpersons in the competency-based programs concerning the influence of teaching quality tended to run very closely to the chairpersons of traditional programs. The CBE respondents were slightly more likely (21 percent versus 16 percent) to indicate that perceived quality of teaching had "little influence" in faculty salary determinations. This could be a reflection of the fact (discussed next and shown in exhibit 4-19) that competency-based education is a bit more commonly associated with collective bargaining agreements.

The responses to this part of question 18 do not provide conclusive evidence regarding the influence of collective bargaining agreements on salary determinations in occupational programs. It is interesting to note that collective bargaining agreements are held to be "not applicable" by fewer competency-based programs than by traditional program chairpersons (47 percent versus 55 percent). This low nonapplicability does suggest that competency-based programs are in fact subject to

EXHIBIT 4-19

SALARY DETERMINATIONS INFLUENCED BY COLLECTIVE BARGAINING AGREEMENTS

Type of Program	To What Extent do Collective Bargaining Agreements Influence Salary Determinations?			
	Great Influence	Average	Little Influence	Not Applicable
Competency-Based	35%	9	9	47
Traditional	40%	1	4	55

greater influence from collective bargaining agreements. The respondents who answered that bargaining agreements yield a "great influence" may have been referring to the intensity of the influence rather than to the fact of its presence.

The last difference in salary determination factors to be discussed--interactions with employers--is shown in exhibit 4-20. The response to this part of question 18 is notable for the reason that so many of the programs indicated that interaction with employers was not related to salary determination: Two-thirds of the traditional programs answered "not applicable;" significantly fewer of the competency-based program chairpersons answered similarly (52 percent). Although interactions with employers are not a crucial factor in salary determinations, the data show that interactions are more of a factor in competency-based programs. The process of installing a competency-based program--DACUM, itemization of competencies, maintaining relevance of instruction, and job placement--require repeated consultation with employers. The fact of greater emphasis on interactions with employers also substantiates the finding that placement is of greater importance in CBE than in traditional occupational instruction. A successful placement program benefits from on-going contact with employers and in many cases, the contact is solely between instructor and employer.

Conclusion

The data that have been presented in this paper are intended to facilitate the debate over the benefits--and the drawbacks--of competency-based education by examining and comparing relevant responses from chairpersons in competency-based as well as traditional programs. One dilemma to emerge in any comparison of the two is the realization that neither of them is in a position to completely replace the other. The particular benefits that competency-based education has to offer--early completion by students, improved accommodation of special needs students,

EXHIBIT 4-20

SALARY DETERMINATIONS INFLUENCED BY FACULTY INTERACTIONS WITH EMPLOYERS

Type of Program	To What Extent do Faculty Interactions with Employers Influence Salary Determinations?			
	Great Influence	Average	Little Influence	Not Applicable
Competency-Based	8%	14	27	51
Traditional	2%	10	20	68

heightened efforts to place students in jobs, and so forth--are to an extent offset by the price paid by students in the form of increased feelings of alienation, the curtailment of some instructional activities (such as lectures), need for updated facilities and equipment, and the like. In their most simplistic formulations--learning adjusted to a fixed length of time, or length of instruction adjusted to match a fixed learning objective--the two approaches seem to be incompatible.

The development of an improved instructional model lies quite outside the scope of this paper. Nevertheless, a solution to the "best of both programs" dilemma suggests itself within the crux of the problem, in how time or duration of instruction should influence instructional delivery. Why not have it both ways? One part of a week's instruction could be devoted to competency-based instruction and the remainder could be a seminar wherein the instructor may lecture and/or students may share their expertise, problems, and encouragement.

Such a hybrid approach and, for that matter, the CBE approach itself need to be subjected to more complete analyses than was possible within the confines this study. For one thing, mediating influences not observed (or perhaps not even measurable) may explain part of the differences that were discussed here. Furthermore, mail survey responses are subject to misinterpretation or inconsistent interpretation of questions and terms. The continuum used to define CBE versus traditional programs has not been validated.

Nevertheless, with these caveats in mind, the survey data do appear to present evidence that CBE is delivering on many of its promises. Such programs are not without problems, however, as could be inferred from chairpersons' responses and observer interpretations. The potentiality of CBE calls for more research and evaluation to determine if and when CBE is appropriate for whom.

CHAPTER 5

DEGREE OF INVOLVEMENT IN ADMINISTRATIVE DECISION MAKING OF POSTSECONDARY OCCUPATIONAL EDUCATORS

George D. Dean

Governance and autonomy of decision making at the postsecondary level have been a focus of concern in recent years. Concerns have been raised as to the growing control of state agencies in areas of institutional decision making, and how this growth affects local decision making. An optimal balance between central coordination and institutional autonomy is considered to be important in today's changing world where both guidance and independence are needed. Concerns have also been raised as to the need for the development of more participatory governance at the local level.

This chapter will explore and compare the degree of decision-making influence that instructors, administrators, local boards of trustees, and state agencies have on institutional matters in occupational education. The first section presents an overview of the issues involving state centralization and individual participation in postsecondary occupational institutions. The second section discusses the literature related to and the current context of participation in governance structures. The third section presents a framework for research and findings. Finally, discussion of the findings is given in the fourth section.

Background

Organizational structure tends to influence how, where, and when decisions are made. Two factors strongly influence where the decisionmaking control of postsecondary occupational education lies. The first factor is the degree of state authority that has been established. The second factor is the degree of decisionmaking involvement established within the institution.

The Growth of State Authority

Much has been written about the trend toward greater state centralization of governance for postsecondary education. Some educators have defended the higher level of state involvement citing that this trend is a part of the decentralization of federal government in education. Others have written that the control of postsecondary education is increasingly being taken out of the hands of educators closest to the classroom and is being placed in the hands of state agencies.

The trend of state centralization in decision making can be viewed as important from several perspectives. Moody (1978) has argued that total local autonomy of postsecondary education is neither possible nor desirable, and that state agencies inevitably play important roles. It is argued that centralization of authority brings about an economy of savings through uniform expenditure levels, distribution of limited resources, elimination of duplication, and effective communication systems. Accountability is called for when state resource allocations are provided. The public wants to know how its taxes are spent. Total local autonomy is not realistic in today's political economic context because postsecondary institutions often need powerful agencies to act on their behalf in establishing, expanding, and acquiring sites and facilities, establishing and maintaining information systems, and stabilizing institutional financial support.

According to Gentry (1983), this trend of greater state governance in occupational education is often attributed to increased public and political pressures to improve education and to increased funding expectations placed on the states by federal government and the voting public. The increasing reliance upon state decision making was greatly aided by the Vocational Education Act of 1963 which called for the creation of a sole state agency to administer federal vocational educational funds. The current Vocational Education Act of 1984 maintains the sole state agency clause despite some misgivings concerning institutional autonomy. The current law does explicitly emphasize the need for local decision making, however.

Judging from public reaction to negative reports such as A Nation at Risk and Involvement in Learning, an increase in political pressure to improve education may have increased the movement to greater centralization of education. A host of stakeholders, including governors and legislators are now highly involved. Powerful state governing boards, state administrative agencies, and district boards apparently see failure at the local level as a responsibility and have sought to increase control to remedy this perceived failure.

Some community college educators have criticized greater state involvement and sought greater local governance control. Zoglin (1977) summarized several concerns for the increases observed in state coordination of local matters. One major concern is that decisions are made increasingly at a distance from the scene of action. Faculty, trustees, and administrators often feel out of touch and out of control. A second concern is that creativity suffers at the local level. The more centralized the control--and also the more remote the decision making process from the operating level--the more difficult it is to attain approval for a proposal, to take timely action, to elicit motivation for innovation on campus, and to maintain institutional vitality. A third concern is the threat of bureaucratic standardization of the individuality of institutions. Standardization may create more local problems than it solves by removing identity, pride, and a sense of uniqueness. To impress this point, Berdahl (1971) pointed out that the states that have outstanding postsecondary systems have provided the greatest decisionmaking autonomy for their institutions.

Regardless of these concerns, the trend toward greater state governance in education is likely to increase according to both Zoglin (1977) and Gentry (1983). The struggle over control of federal funds, the state gubernatorial and legislative response to changing priorities in education, and other factors will continue to influence the centralization of postsecondary oversight. If the state dominates the institutional decisionmaking process, then state centralization may discourage participation in decision making at local institutions.

Administrative, Faculty and Board Involvement

As organizations, community colleges and four-year institutions have demonstrated their awareness of the need for more participatory local governance and have attempted to move away from the highly authoritarian system established early on in the education system. The extent that they have moved toward a more participatory system, however, has not been clearly established.

How involved the local parties are in institutional decision making is mainly determined by the structure, goals, and administrators in the organization. Administrators hold a crucial position in educational structures. They often serve as communication links between state agencies, institutional boards, and faculty and staff in an institution. Administrators are seen as neither policy makers nor product deliverers but as managers. Administrators have the most power of all local stakeholders because of their unique position that controls information that travels up and down the organizational structure. Therefore, postsecondary occupational administrators can be expected to have a high degree of involvement in institutional decisionmaking matters.

Faculty involvement tends to depend on many variables. Administrative management style, type of institution, nature of department or program, individual faculty characteristics and needs, and state governance structure play a part in determining the degree of faculty involvement. Information sharing does not seem to give faculty the power that it does administrators, and it is unclear how much influence on governance decisions postsecondary occupational faculty have at the local level.

The degree of active decisionmaking involvement of boards of trustees or advisory boards is also unknown in occupational schools and programs. Little evidence is found that local boards of community colleges play a significant role according to Moore (1973). The significance of involvement of advisory boards in governance decision making in vocational schools is not known.

Reason for Concern over Who's Involved

There are compelling reasons for being concerned over who is involved in matters of local decision making. Zoglin (1977) pointed out that it is becoming increasingly difficult for interested educators and citizens to know who is involved or where the power lies in controlling postsecondary education. She argued that it is of primary importance to know these things in order to change postsecondary occupational educational outcomes.

Beer, et al. (1985) report that centralized control in organizations will lead to greater complexity and to morale and commitment problems. A concern is that state centralization creates bureaucracies which in turn create social and emotional distance by the use of middle administrators, which in educational organizations are the administrators and department heads of schools and programs. This distance leads to greater state-level insensitivity to faculty and students, thus leading to less trusting relationships and poor communications. In fact, top administrative officers in postsecondary schools and programs may find themselves in the position of being unable to communicate effectively with those above or below. Also, centralized control creates a dependency on external forces that can easily increase distrust of authority. The end results are employees that are unwilling to take responsibility and initiative for their own work or for the mission and goals of the organization in which they are involved. Employees do not develop a feeling of commitment to decisions because they have little input into decisions that affect them, and employee conflict resolution is avoided which further alienates staff.

Richardson, et al. (1972) reported many postsecondary governance systems may be exploitive and authoritative. They pointed out that employees derive little satisfaction from achievement of institutional objectives, communication is distorted, and little understanding between superiors and subordinates exists. Decisions may be made at higher levels than where the greatest expertise exists; also, decision making is not used to influence values or to encourage motivation as goals are set at the highest levels and impressed upon the remainder of the organization. They found that a highly developed informal organization often exists that works in opposition to the formal organization.

Educational human resource experts believe that there are distinct advantages to decentralized systems and participatory systems of governance. A much greater feeling of commitment, greater use of talents, greater faculty creativity, higher productivity, less employee absence and turnover, higher standards, and better communication are found in such systems.

These concerns point out several critical issues. Is there excessive centralization and authoritative styles in postsecondary occupational education? Are administrators willing to share their power? Have governance patterns brought about mistrust and poor communication with state agencies and within occupational structures? Are local instructors, department chairs, and administrators willing to cooperatively take responsibility for quality of instruction and curriculum as well as seek involvement in various levels of governance decisions? These questions address some of the issues that face postsecondary occupational education. Postsecondary educators do not have answers to these questions, nor does it appear they have earnestly attempted to get information in these areas, but it is clear that poor communication, fragmentation, turf guarding, and underinvolved educators are issues that must be addressed.

In summary, occupational educators must be aware of where decisionmaking power lies, the degree of involvement of important parties, and the extent of the balance of power in their organizations. A starting point to understanding where the locus of decision making for local matters lies is to be found in perceptions of local educators.

Review of Literature

A review of the literature reveals that a great deal has been written about higher education governance, but little specifically about postsecondary occupational governance and the characteristics of governance decision making. McGivney (1984) suggests that literature on education governance can be divided into two categories: (1) that dealing with theory building and (2) that describing and comparing the educational governance context.

Theory Building

Two governance models can be said to be most relevant today in postsecondary occupational education: the bureaucratic model and the participatory model.

Bureaucratic Model. The bureaucratic model described by Weber (1947) is used to provide rational efficiency to organizations. Gollattscheck (1985) defined the educational bureaucratic model as a system where education decisions tend to be made at the top of the organizational structure. Leaders in this type of model stress pragmatism, efficiency, and task responsibility. Participation in the decisionmaking process is largely determined by who has the administrative authority.

According to Daft (1985), the use of bureaucratic control in an organization is brought about by rules, policies, the hierarchy of authority, written documentation, and specialization in order to standardize behavior and to assess performance. A high degree of bureaucratic control is believed to be inevitable in modern organizations. The greater the organizational size the greater the number of management levels, the use of specialization of skills, the degree of centralization, the amount of formalization, and the amount of written communications and documentation. The increasing size that brings about bureaucratic procedures insures a progressively higher administrative influence, which actually tends to decrease involvement and participation throughout the system and to increase centralized decision making.

Educational systems have always been bureaucratic to a large extent. Major determinants of the amount of bureaucratic control are the size of the institution and system and the type of policies and procedures that have been put into place. As an educational structure develops and grows larger, it will tend toward institutionalization and ritualism, conservativeism, and ultimately more bureaucratic control. According to Richardson, et al. (1972), the interaction-influence of bureaucratic educational organizations is designed to maximize the position of administrators; thus, instructors perceive their positions as powerless to effect governance change.

Participatory Model. The education participatory model is based on a maximal degree of autonomy for institutions in relations to state and federal government agencies and for individuals in relation to educational authority. Kintzer (1980) described this model in terms of the influence of faculty, staff, and students in policy making and shared decision-making responsibility. The greater the influence of these elements on the institution, the more the structure tends to be oriented toward the participatory model. Also, external parties with influential control such as various community groups and community spokespersons, apart from the formal institutional boards of control, typically serve at least in informal participatory capacities. In participatory systems, administrators serve effectively in resource and coordinating roles. Since leadership becomes a cooperative venture, organizational change is much more complex, slower moving, and geared to strategic ends. At the same time, the organization is more vibrant and meaningful to the constituency served and to the institutional employees.

Participation by a variety of individuals and groups in decision making has always been recognized as important in the history of public postsecondary education, but bringing about and administratively allowing for quality involvement has been a problem. Managing participation is a complex process that involves complex relationships, a slower progress toward ends, and an orientation to long-term strategies. The need for decision making speed may the greatest problem in institutionalizing a participatory model of governance.

Studies of Actual Practice

State Governance and Involvement. Darnowski (1978) described how state agencies impose checks on college fiscal and personnel management in Connecticut and argued that these checks limit the ability of administrators to manage and plan college programs. Campbell (1978) concluded in his study that the community-based nature of the two-year colleges in Michigan is in jeopardy because of the powerful influences of the governor's office, the legislature, and state agencies.

Other authors have focused on state vs. local decisionmaking responsibilities. Kintzer (1984) identified the locus of responsibility for 84 practices related to postsecondary management, curriculum, instruction, personnel, research, student services, and other areas. He found that campuses tended to retain responsibility for curriculum, instruction, and student services and state agencies controlled the other categories--management, personnel, and research. Henry and Creswell (1983) studied 26 multi-unit community college systems to determine where decisions were made in 9 administrative areas. Findings reveal that faculty and student-related matters were generally decided at the campus level, while major planning and financial matters were decided at the district or state levels.

Some authors have argued that states must have a high involvement in local education. Moody (1978) believed that state interest must be provided for if local action is not sufficient and that an optimum balance is essential between state and local decision-makers. Miner (1979) and Mundt (1978) found that increased state control has brought with it a certain degree of fiscal stability.

Few studies were found that specifically address state involvement in decision making in occupational education areas. Woodruff's (1978) landmark study was the first thorough classification of state and local vocational education systems. In this large and detailed study, three comparative state level structures were identified: state board types, state agency responsibility for vocational education up to associate degree levels given by community colleges, and legal state agency authority over local institutions. Gentry (1979) used a different classification for describing state vocational structures but with conclusions similar to Woodruff. Gentry surveyed state governance structures as well as their characteristics. Characteristics studied were state board selection, membership, length of service, prior positions of executive officers, and administrative functions. These studies have aided in understanding who is involved, but such studies do not address specifically the degree of involvement in important decisions that effect classroom curriculum and instruction. These two studies do imply a highly bureaucratic governance structure that directs state secondary and postsecondary vocational educational activities.

Involvement in Institutional Governance. Gollattscheck (1985) reported proceedings of a study Sumler (1983) presented to a statewide conference in Maryland which studied the perceived involvement of faculty in community college governance. In this study, college presidents perceive faculty to have considerable involvement in governance, while faculty perceived themselves to have much less involvement. Weaver (1977) also found a high degree of disagreement between administrators and faculty perceptions of community college governance participation.

Palmer (1985) surveyed literature on participatory governance in community colleges. In his survey, studies by Mortimer (1975) and Richardson (1976) showed that the community colleges were more likely to be characterized by administrative dominance in the decisionmaking process than were four-year colleges. Helling (1975) found that community college faculty tend to be happier with governance systems that leave the task of institutional decision making and budgeting to administrators.

Clay (1976) studied the relationship between participatory governance and job satisfaction in North Carolina community colleges. He found two institutes with a high degree of democratic governance, and two institutes with more hierarchical systems. The relationship between involvement in governance and satisfaction with job security, sense of belonging in the institution, self-esteem, sense of autonomy, and professional opportunities were significantly positive. However, the correlation for vocational faculty in this study was considerably lower than for academic instructors. Bennett and Shannon (1976) found that part-time faculty participated little in community college governance and that the respondents had no clear idea of the meaning of governance.

Framework for this Study

Perspective of Involvement

Different persons in postsecondary occupational education look at involvement in administrative decision making from different perspectives. Alfred, et al. (1987) writes that the student's perspective focuses on whether or not a quality learning experience exists, the instructor's perspective on learning outcomes, the administrator's perspective on efficiency, and the local and state community's on effectiveness of service to the society. It is appropriate to keep Alfred's categories in mind as this study explores the perspectives of the administrative officer on the involvement of various parties in postsecondary institutions' administrative, academic, and financial matters.

The dependent variable is the perceptions of the local administrative officer for postsecondary occupational education. Two independent variables were chosen: state and local educators' involvement in the decision and type of institution.

Of the many possible individuals and groups that theoretically can become involved in school decisions, the framework focused on four levels of state and local educators that potentially become involved in most institutional decisions: faculty of departments, local school administration, local board of trustees, and primary state administrative agency.

Different types of schools tend to structure the involvement of individuals and groups in different ways. Three different types of institutions were studied: Type 1 is the junior and community college, type 2--the vocational-technical institute, and type 3--four year college/universities with occupational programs.

Type 1 institutions, junior and community colleges tend to have similarities to four year colleges and universities, type 3, in areas of courses taught and state agency reporting procedures. They began as two year liberal arts schools for the purpose of providing transferable credits to senior colleges and universities. Community colleges have recently begun to concentrate on building their occupational programs and have become a major provider of occupational education at the postsecondary level. As a result of their history, administrative perceptions are uniquely theirs when compared to senior colleges and vocational-technical schools.

Type 2 institutions, vocational-technical schools, were created with occupational training as their major mission. They were not originally interested so much in articulation as in job training and placement. The state organizational structures of vocational-technical institutes have been tied with state governing boards responsible for K-12 instruction. Basic academic foundations have become more important to these schools in recent years; however, the philosophy, instruction, and perceptions are considered unique from those of community colleges or four-year colleges.

Of particular interest in this research effort are the perceptions of head administrators for programs and schools that have occupational postsecondary programs in the three types of institutions with programs terminating with associate degrees or diplomas. The research was conducted to determine if there is a significant difference in involvement between types of schools that provide occupational education.

Findings of the Study

A random sample of 725 institutions with postsecondary occupational programs in 51 states were surveyed. Responses were gathered from a total of 377 occupational administrators. There were 191 type 1 institutions represented, 117 type 2 institutions represented, and 67 type 3 institutions represented. The survey asked for the administrative perceptions on the extent of governance decisionmaking involvement of local and state educators. An "involvement" scale was used to indicate how active faculty, administrators, board of trustees (or advisory boards), and state agencies are in local governance matters relating to selected administration, academic, and financial matters. The selected areas of decisionmaking involvement were:

- Searches for Administrative Staff
- Institution's Calendar
- Promotion/Retention
- Institution Mission
- Budget Process
- Instructor Evaluation
- Administrator Evaluation
- Grading Standards
- Professional Development Activities
- Facilities and Equipment

The involvement perceived by administrators was indicated as (1) none, (2) little, (3) some, (4) moderate, and (5) high, and an average rating was calculated for each decision maker in each area of possible involvement.

Degree of Perceived Decision-Making Involvement

The frequencies and average rating of all respondents for the perceived degree of involvement is shown in exhibit 5-1. Some administrators chose not to rate every decision maker on every area; therefore, the total responses are different for each area of involvement. In all cases except one (grading standards), administrators have the highest average. State agencies have the lowest average involvement in all cases except three--budget, mission, and facilities/equipment, which received a rating of moderate. Average ratings above 3.5 are referred to hereafter as high involvement and below 2.5 as low involvement.

In involvement in searches for administrative staff, average ratings reveal administrators perceive themselves as highly involved (4.75) and state agencies as little involved (1.48). Average ratings in setting the institution's calendar reveal administrators perceive themselves again as highly involved (4.61), and state agencies as little involved (1.81).

EXHIBIT 5-1

AVERAGE RATINGS OF ADMINISTRATOR PERCEPTIONS OF INVOLVEMENT IN GOVERNANCE DECISIONS

Area of Involvement/Group	Sample Size	Average Rating
Searches for administrative staff		
Instructors in depts.	348	3.02
Institution admin.	364	4.74
Local bd. of trustees	349	2.66
State agency(ies)	347	1.48
Institution's calendar		
Instructors in depts.	350	3.27
Institution admin.	364	4.61
Local bd. of trustees	345	2.59
State agency(ies)	341	1.81
Promotion/retention of instructors/staff		
Instructors in depts.	346	3.68
Institution admin.	362	4.69
Local bd. of trustees	343	2.80
State agency(ies)	337	1.32
Institution mission		
Instructors in depts.	357	3.92
Institution admin.	362	4.75
Local bd. of trustees	348	4.24
State agency(ies)	339	2.87
Budget process		
Instructors in depts.	350	3.79
Institution admin.	357	4.87
Local bd. of trustees	340	3.83
State agency(ies)	333	2.91
Instructor evaluation		
Instructors in depts.	345	3.95
Institution admin.	353	4.41
Local bd. of trustees	334	1.57
State agency(ies)	333	1.22
Administrator evaluation		
Instructors in depts.	350	2.61
Institution admin.	352	4.48
Local bd. of trustees	338	2.85
State agency(ies)	338	1.56

EXHIBIT 5-1--Continued

Area of Involvement/Group	Sample Size	Average Rating
Grading standards		
Instructors in depts.	358	4.61
Institution admin.	356	3.90
Local bd. of trustees	341	1.82
State agency(ies)	341	1.49
Prof. development activities		
Instructors in depts.	352	4.32
Institution admin.	354	4.52
Local bd. of trustees	338	2.24
State agency(ies)	337	2.14
Facilities and equipment		
Instructors in depts.	360	4.11
Institution admin.	361	4.76
Local bd. of trustees	343	3.41
State agency(ies)	340	2.77

In the decisionmaking area of promotion and retention of instructors and staff, average ratings reveal administrators perceive themselves as highly involved (4.69) and instructors as highly involved (3.68). State agencies are perceived as little involved (1.32). In rating decisionmakers' influence on institutional mission, average ratings reveal administrators perceive themselves as highly involved (4.69) and instructors as highly involved (3.92). Local boards are perceived as also highly involved (4.24).

Average ratings for involvement with the budgeting process show three highly involved parties: administrators (4.87), instructors (3.79), and local boards (3.83). In ratings of involvement in instructor evaluation, parties are either highly involved or little involved. Administrators (4.41) and instructors (3.79) are rated as highly involved. Local board (1.57) and state agency (1.22) are rated as little involved. In administrator evaluations, administrators perceive themselves as highly involved (4.48) and they perceive state agencies as little involved (1.22).

All decision makers are perceived as either highly involved or little involved in governance decisions on grading standards. Instructors (4.61) and administrators (3.90) are highly involved, while local boards (1.82) and state agencies (1.49) are little involved. In involvement relating to professional development activities, all parties are perceived as either highly involved or little involved. Administrators (4.52) and instructors (4.32) are perceived as highly involved. Local boards (2.24) and state agencies (2.14) are perceived as little involved. In decisions concerning facilities and equipment, administrators perceive themselves (4.76) and instructors (4.11) as being highly involved.

In summary, instructors are most involved in governance decisions regarding grading standards, professional development activities, and facilities and equipment. Administrators are highly involved in all areas with greatest involvement in budget process, facilities and equipment, mission, and searches for administrative staff. Local boards show highest involvement in institutional mission and budget process. State agencies are involved the most in budget process, mission, and facilities and equipment.

Comparisons by Type of Institution

Moderate and high responses for the designated decision makers were analyzed by type of institution in order to gauge variation in perceptions across this independent variable. Chi square tests of independence were calculated for each level of the independent variables. A probability of less than .05 was determined as significant to show independence. Cramer's V was then calculated to provide a point estimate for the relationship in the population of all type 1, type 2, and type 3 institutions in the United States.

Exhibit 5-2 shows the percentage of moderate or high involvement responses in searches for administrative staff. A significant difference is found between the types of institutions for instructor and state agency involvement. Type 1 (community colleges) and type 3 (four year colleges) have significantly higher involvement of instructors in searches for administrative staff than type 2 (vocational-technical) schools. Type 2 has significantly higher state agency involvement than type 1 or type 3.

Exhibit 5-3 shows the percentage of moderate and high involvement of decision makers in setting institutions' calendars. A significant difference exists between state agencies and type of institution. State agencies have significantly more influence in type 1 and type 2 institutions than in type 3 institutions.

Exhibit 5-4 shows the administrator perspective of who is highly involved in promotion and retention of instructional staff. There is a significant difference between instructors and institutional type and between state agencies and institutional type. Instructors tend to be the least involved in type 2 institutions, and state agencies tend to have higher involvement in type 2 institutions.

Perceptions of who is highly involved in setting the institutional mission is shown in exhibit 5-5. Involvement by

EXHIBIT 5-2

PERCENTAGE OF INSTITUTIONS WITH MODERATE OR HIGH INVOLVEMENT IN SEARCHES FOR ADMINISTRATIVE STAFF

Decision maker	Type of Institution Type 1	 Type 2	 Type 3	X^2	V
Instructors	38.7%	21.4%	41.8%	22.3*	.24
Local administrators	92.7%	85.5%	92.5%	4.8	
Board of trustees	29.3%	28.2%	25.4%	.4	
State agencies	4.7%	17.1%	0.0%	22.4*	.24
n	191	117	65		

* = probability of ≤ .001

EXHIBIT 5-3

PERCENTAGE OF INSTITUTIONS WITH MODERATE OR HIGH INVOLVEMENT IN SETTING INSTITUTION'S CALENDAR

Decision maker	Type of Institution Type 1	 Type 2	 Type 3	X^2	V
Instructors	47.6%	34.2%	41.8%	5.4	
Local administrators	91.1%	87.2%	83.6%	3.1	
Board of trustees	26.7%	29.9%	13.4%	6.5	
State agencies	14.1%	12.0%	0.0%	10.4**	.16
n	191	117	65		

** = probability of ≤ .01

EXHIBIT 5-4

PERCENTAGE OF INSTITUTIONS WITH MODERATE OR HIGH INVOLVEMENT IN PROMOTION/RETENTION OF INSTRUCTIONAL STAFF

Decision maker	Type of Institution Type 1	 Type 2	 Type 3	X^2	V
Instructors	63.9%	28.2%	86.6%	67.1*	.42
Local administrators	88.5%	89.7%	91.0%	0.4	
Board of trustees	30.4%	33.3%	22.4%	2.5	
State agencies	2.1%	8.6%	1.5%	9.2**	.16
n	191	117	67		

* = probability of ≤ .001 ** = probability of ≤ .01

EXHIBIT 5-5

PERCENTAGE OF INSTITUTIONS WITH MODERATE OR HIGH INVOLVEMENT IN SETTING INSTITUTIONAL MISSION

Decision maker	Type of Institution Type 1	 Type 2	 Type 3	X^2	V
Instructors	65.0%	64.1%	61.2%	0.5	
Local administrators	92.2%	93.2%	94.0%	0.3	
Board of trustees	74.9%	61.5%	82.1%	10.5**	.17
State agencies	28.8%	46.2%	22.4%	14.1*	.19
n	191	117	67		

* = probability of ≤ .001 ** = probability of ≤ .01

boards of trustees and state agencies are significantly different between institutions. Trustees in type 1 and type 3 schools have significantly higher involvement in setting the institutional mission than trustees in type 2 institutions. State agencies for type 2 institutions have significantly greater involvement in setting institutional missions than state agencies for type 1 and type 2 institutions.

Exhibit 5-6 shows the percentage of moderate and high involvement scores for the budget process. A significant difference exists between instructors and type of institution and state agencies and type of institution. Instructors in type 1 and type 3 institutions tend to be more highly involved than

EXHIBIT 5-6

PERCENTAGE OF INSTITUTIONS WITH MODERATE OR HIGH INVOLVEMENT IN INSTITUTIONAL BUDGET PROCESS

Decision maker	Type of Institution Type 1	 Type 2	 Type 3	X^2	V
Instructors	64.4%	48.7%	56.7%	7.4***	.14
Local administrators	93.7%	92.3%	94.0%	0.3	
Board of trustees	63.4%	52.1%	61.2%	3.9	
State agencies	34.0%	47.0%	28.3%	7.9***	.15
n	191	117	65		

*** = probability of ≤ .05

instructors in type 2 institutions. State agencies for type 2 institution tend to be more highly involved than state agencies for type 1 or type 3 institutions.

Exhibit 5-7 shows who is most highly involved in instructor evaluations by type of institution. Involvement of instructors and local administrators are significantly different across institution type. Type 1 and type 3 instructors and administrators tend to be more highly involved than type 2 instructors and administrators in instructor evaluations.

EXHIBIT 5-7

PERCENTAGE OF INSTITUTIONS WITH MODERATE OR HIGH INVOLVEMENT IN INSTRUCTOR EVALUATION PROCESS

Decision maker	Type of Institution Type 1	 Type 2	 Type 3	X^2	V
Instructors	74.4%	41.5%	76.1%	38.2*	.32
Local administrators	77.0%	87.2%	65.7%	11.8**	.18
Board of trustees	4.7%	2.6%	4.5%	0.9	
State agencies	1.6%	2.6%	0.0%	1.8	
n	191	117	67		

* = probability of ≤ .001   ** = probability of ≤ .01

A significant difference exists between type of institution and all decision makers studied concerning involvement in administrator evaluation as shown in exhibit 5-8. Instructors and

EXHIBIT 5-8

PERCENTAGE OF INSTITUTIONS WITH MODERATE OR HIGH INVOLVEMENT IN ADMINISTRATOR EVALUATION PROCESS

	Type of Institution				
Decision maker	Type 1	Type 2	Type 3	X^2	V
Instructors	33.5%	17.1%	25.4%	10.0**	.16
Local administrators	90.1%	65.0%	86.6%	31.7*	.29
Board of trustees	27.2%	41.9%	37.3%	7.5***	.14
State agencies	5.2%	21.4%	1.5%	27.9*	.27
n	191	117	67		

* = p of $\leq$ .001   ** = p of $\leq$ .01   *** = p of $\leq$ .05

local administrators tend to be less highly involved in administrative evaluation in type 2 institutions. Boards of trustees tend to be more highly involved in type 2 and type 3 institutions. State agencies tend to be more highly involved in type 2 institutions.

As shown in exhibit 5-9, all types of institutions are significantly different in who's involved in decisions determining institutional grading standards. Instructors in type 1 and type 3 institutions tend to have higher involvement than instructors in type 2 institutions. Local administrators in type 2 institutions tend to have higher involvement than administrators in type 1 or type 3 institutions. Boards of trustees in type 2 institutions tend to have higher involvement than boards in type 1 and type 3

EXHIBIT 5-9

PERCENTAGE OF INSTITUTIONS WITH MODERATE OR HIGH INVOLVEMENT IN DETERMINING INSTITUTIONAL GRADING STANDARDS

	Type of Institution				
Decision maker	Type 1	Type 2	Type 3	X^2	V
Instructors	90.6%	76.9%	91.0%	13.0*	.19
Local administrators	55.0%	76.1%	52.2%	16.3*	.21
Board of trustees	7.3%	13.1%	1.5%	8.8***	.15
State agencies	4.7%	13.7%	4.5%	9.5**	.16
n	191	117	65		

* = p of $\leq$ .001   ** = p of $\leq$ .01   *** = p of $\leq$ .05

institutions. State agencies for type 2 institutions tend to have higher involvement than state agencies for type 1 and type 3 institutions.

Exhibit 5-10 shows instructors in type 1 and type 3 institutions tend to be more highly involved in determining professional development activities than instructors in type 2 institutions. State agencies in type 2 institutions show significantly more involvement than state agencies in type 1 and type 3 institutions.

EXHIBIT 5-10

PERCENTAGE OF INSTITUTIONS WITH MODERATE OR HIGH INVOLVEMENT IN DETERMINING PROFESSIONAL DEVELOPMENT ACTIVITIES

	Type of Institution				
Decision maker	Type 1	Type 2	Type 3	X2	V
Instructors	81.1%	69.2%	83.6%	7.5***	.14
Local administrators	84.3%	88.9%	80.6%	2.5	
Board of trustees	13.1%	15.4%	4.5%	5.0	
State agencies	10.5%	37.6%	3.0%	48.9*	.36
n	191	117	65		

* = p of ≤ .001 *** = p of ≤ .05

Exhibit 5-11 indicates the differences between type of institutions in the percentage of moderate and high involvement ratings in determining institutions facilities and equipment. State agencies for type 2 institutions tend to have significantly higher involvement than state agencies of type 1 and type 3 institutions.

Discussion

This research into involvement of governance matters in postsecondary occupational education suggest several conclusions. First, according to the perceptions of the administrators in this sample, state agencies do not have a high level of involvement in the areas surveyed. The highest average rating was a moderate 2.91 (budget process), while the lowest average rating was a low 1.22 (instructor evaluation). The average of all 10 areas show the state agencies with only a 1.95 average. When analyzed by type of institution, state agencies have the highest involvement in vocational-technical institutions. Community colleges also tend to have high state agency involvement, whereas four-year institutions have the least state agency involvement.

EXHIBIT 5-11

PERCENTAGE OF INSTITUTIONS WITH MODERATE OR HIGH INVOLVEMENT IN DETERMINING FACILITIES AND EQUIPMENT

Decision maker	Type of Institution Type 1	 Type 2	 Type 3	X^2	V
Instructors	73.8%	71.8%	68.7%	0.7	
Local administrators	90.1%	95.7%	92.5%	3.3	
Board of trustees	50.8%	41.8%	38.8%	4.0	
State agencies	24.6%	44.4%	13.4%	23.3*	.25
n	191	117	65		

* = probability of $\leq$ .001

Second, according to the administrators surveyed, the local administrators themselves have the highest degree of decision-making involvement in all matters by a wide margin when compared to instructors, local boards, and state agencies. The grand average of all ratings on administrative involvement is 4.57, while the instructors' grand average is 3.72 and local boards' grand average is 2.80. It is clear that administrators in occupational programs see themselves as having the greatest decision making influence of all parties.

Third, a pattern emerged that shows vocational-technical institutions as significantly different from community colleges and four-year institutions. Instructors tend to be less involved in vocational-technical institutions, and state agencies tend to be more involved. In postsecondary occupational programs in the United States, it can be inferred that vocational-technical institutions have less highly involved instructors in institutional decision making and that state agencies are more highly involved in institutional decision making.

Fourth, local boards of trustees tend to have more influence in occupational program decision making in community colleges and vocational technical institutions than in four year institutions. The major exception to this generalization is in the area of setting the institution's mission, where the comparison is significantly different and four-year institutions tend to have higher involvement by boards of trustees.

CHAPTER 6

THE ROLE OF CAREER PLANNING AND PLACEMENT SERVICES

Betty L. Rider

For many students entering postsecondary institutions, the culminating goal is not graduation, but gainful employment in a job related to their training. Assisting the student in finding the job that best matches their training and background has traditionally been the work of the placement office. Placement offices, however, have evolved within the last thirty years from a function that was strictly interested in placing the student in a job, to a full-service function that offers for-credit courses, resume assistance, job interview skills, career counseling, and many other services. Due to the changes in the nature of the function of the placement office, the term career planning and placement will be used throughout this paper to better reflect the nature of the service.

Background and Introduction

The following definition is used as the definition applicable in this study:

> The central philosophy of career planning is to teach students how to help themselves in the establishment of career objectives and in the implementation of procedures designed to satisfy career goals. The effectiveness of the career planning and placement function can best be measured by the educational value for students. (Powell and Kirts, 1980, p. 9)

This definition reflects the philosophy that career planning and placement offices should go beyond assisting the student in securing employment, but teaching the student all of the essentials of how to secure employment on their own. This type of career planning and placement function is also a part of the educational process and not a separate activity that happens within the last semester before graduation.

The National Vocational Guidance Association (NVGA) Commission (1979) supports the philosophy that career planning and placement should be a part of the educational process. They state that:

> . . . it is an integrating dimension emphasizing the interrelatedness of educational, vocational, personal/social, and leisure experiences as part of total education. The responsibility in the various components of a quality career guidance program must not be left to chance. (p. 100)

The commission also contends that activities should happen at all levels of education and that these activities will facilitate the educational process.

Location and Structure

Career planning and placement services vary from institution to institution. Lucas (1986) focused on the institutional location of the career planning and placement function:

> There are numerous methods of organizing career services and placement offices including: decentralized placement, centralized placement, combining career planning services with placement functions, and linking career planning and placement operations with counseling services. (p. 12)

Lucas went on to state that the structure and function of each individual office was related to the history of career planning and placement at each institution and the current director's background and education in career planning and placement.

The position of the career planning and placement office within the organizational structure is one of debate. At some institutions, the function is centralized; all students, faculty, and employers interact through one office and staff. At other institutions, the function is decentralized; career planning and placement is offered by individual college or program division. There are advantages to both; the determining factors are institutional size, mission, and money.

Powell and Kirts (1980) indicate that over 80 percent of career planning and placement offices are centralized. No hard line rules were offered as the best approach for position within the management structure; decisions on where to place the function has to happen at the institutional level. They pointed out that successful decentralized career planning and placement functions were difficult to centralize due to a resistance to alter current practices. Beaumont, et al. (1978) indicated that the career planning and placement function generally reports to the head of the student services division. A trend was also identified to position career planning and placement in the academic division. They stated,

> It is the belief of leaders in the field of college career counseling and placement that this is a highly desirable arrangement because it not only recognizes the educative role of career and placement counseling, but also provides a better opportunity for those persons charged with the operation of the function to work closely with faculty and instructional officers. (p. 36)

This location issue will not be discussed in great detail, as the institutions studied in this study span the entire spectrum of methods for organizing career planning and placement offices. The empirical data presented below reinforce the extent of variation. This background section focuses on generic programs and services offered by the career planning and placement function.

Involvement in Curricular Decisions

Postsecondary institutions that offer occupational training usually have a vested interest in assisting students in finding employment related to their training. Students will not choose to enroll in programs where the graduates cannot find employment. Thus, it is essential that programs offered fulfill a need within the employment sector. Occupational programs need to produce graduates who can gain employment; consequently, career planning and placement officers should assist in the curricular decision-making process, using their business and industry contacts to keep the curricula relevant.

Little has been written about the involvement of career planning and placement offices or personnel being involved in the academic curricular decisionmaking process. Although many career planning and placement personnel may teach courses related to career development, apparently few are involved in the academic curriculum process, or they have chosen not to write about it.

An area of inquiry in this study is the identification of who is involved in the curriculum development process and what impacts those decision makers have on the curriculum. As career planning and placement services have a high concern for student placement in jobs and providing students with the information and skills necessary to obtain those jobs, it is a hypothesis of this study that placement officers are involved in the curricular decision making process.

Goals and Services

While services may vary from institution to institution, the goals of career planning and placement services remain stable. A career planning and placement office should offer services to students and employers with an ultimate goal of training students how to establish their own career goals and how to achieve those goals. Beaumont, et al. (1978) identify career planning and placement as an educational function that should meld with the curricular process. The Career Planning Concept put forth by Powell and Kirts (1980, p. 8), has three steps: self-assessment, career exploration, and placement. Each step has several activities to assist the student in completing each step. The services offered by career planning and placement offices are based on goals such as these and provide an overall ideal to aim toward.

Based on student perceptions, Adamson (1978) identified career planning and placement activities as the following: (1) acquiring immediate job seeking skills; (2) gaining knowledge about specific careers; (3) gaining insight into oneself and self/career capability; (4) gaining awareness of lifestyles and work roles; and (5) gaining helpful hints and insights. These activities focus on preparing students for job search skills and strategies rather than actually matching students with jobs. It is interesting to note that these are the students' perceptions of career planning and placement services.

The services offered by institutions will vary according to institution size, number of students enrolled, and the budget allotted to career planning and placement services. Powell and Kirts (1980) offer the following list of student services: resume services, student files, career counseling, placement counseling, group counseling, academic counseling, career planning courses, placement seminars, vocational testing, and career library. They also offer a list of employer services: job listings, job development, job referrals, resume files, employer files, faculty-employer liaison, and alumni placement.

In a 1980 study of university placement offices, Bryant, et al. (1981) found the major services offered to be resume assistance, letters of reference, alumni placement, job search strategy, career planning, and interview training. They also found the major weaknesses to be a lacking of staff, funds, and space. Using the standards set forth by Powell and Kirts (1980), most career planning and placement offices appear to be offering many of the services suggested.

Cass and Park (1985) developed a model school-based job placement program for the State of Missouri, placing the following tenet as the locus around which their program was developed:

> . . . placement is one of the most critical problems of vocational-technical education and cannot be left to chance. The ability to wage an efficient job search is not inherent. It must be learned. School-based job placement services are a necessity in today's successful vocational-educational school. (p. vi).

While this tenet referred to secondary education, the concept holds for the postsecondary arena as well. Four areas of placement program responsibility are identified by this model:

pre-employment preparation, job development, job placement, and follow-up activities. Involvement in activities in these four areas assist the student in transitioning from school to the work environment. Job placement program effectiveness depends upon direction, support personnel, organization of the office, administrative commitment, faculty commitment, community support, coordinated activities, interactions with students, and public relations efforts.

Program Components

The National Vocational Guidance Association (NVGA), Commission (1979) listed the necessary commitments to a unified approach to career planning and placement:

1. Commitment by the education community to program improvement to meet changing student needs.

2. Commitment to a conceptual model that incorporates the basic principles of career development, self-understanding and interpersonal effectiveness, awareness to the worlds of work, leisure and career planning, decision-making, and implementation.

3. Commitment to integration of career development goals with the other educational goals within the total school program.

4. Commitment to the involvement of all factions of the community.

5. Commitment to specify leadership for program development and implementation. (pp. 101-102)

The NVGA also recommended four steps to developing a model program: planning, organizing, implementing, and evaluation.

Powell and Kirts (1980) also advocate a systematic approach to career planning and placement services. Six components to this approach are coordination of resources, awareness programming, self-assessment, career exploration, job search training, and interagency cooperation. The program was designed as comprehensive in nature and span the course of the student's time in the institution. This is a flexible system that allows the use to access or regress from the process time.

Hafer (1982) also supports the comprehensive, unified approach. Hafer suggested that a realistic assessment of available resources at each institution will show that a total comprehensive career planning and placement function is not possible nor feasible. Community colleges, Hafer suggested, should determine which program components would be most beneficial to the students and fit within the financial resources available and design an appropriate career planning and placement function on that basis.

Career Resource Centers (CRCs) evolved through efforts to consolidate resources and offer an alternative to major comprehensive career planning and placement offices. Marshall (1982) offered a list of major components of CRCs:

- provide up-to-date occupational, educational and personal-social information;
- help individuals use resources to achieve their goals;
- promote thoughtful career planning and decision making;
- assist individuals in assessing and understanding their personal attitudes, values, interest, and aptitudes;
- foster the integration of career development activities into classroom instruction;
- promote a delivery system for career counseling services;
- prepare individuals for life-role transitions;
- provide a setting where individuals can feel comfortable in showing their interests and concerns in a non-threatening environment. (p. 1)

Extensive use of para-professionals in the CRC setting allows for economic use of funds and trained professional time. These components provide a holistic approach to student assistance in career awareness, skill development for seeking and obtaining a job, and life choices for style and quality compatible with student goals.

Student Outcomes

A lot of interest exists in student outcomes; after all, the reason institutions exist is to meet the needs of its students. Traditionally, student outcomes have been measured by graduation and job placement; placement rates have been the measuring stick for occupational programs. A study done by McKinney and Halasz (1984) identified a number of strategies to increase the placement of students in postsecondary occupational programs. Those factors found to impact placement rates were educational, labor market, placement activities, and community involvement. Recommendations to postsecondary institutions included:

- develop clear statement of the goals for postsecondary vocational-technical education programs. Promote and reward enthusiasm for placing students in jobs related to training.

- Encourage frequent and active meetings of citizen advisory committees and utilize their recommendations in program planning and evaluation.

- Use job placement data as a major criterion for evaluating programs.

- Recognize the importance of instructors in the job placement process by including instructor performance in job placement as a criteria for tenure, promotion, and salary adjustments.

- Recognize the importance of the role played by chief administrators and deans/directors in the job placement process. Reward chief administrators and deans/directors for their leadership and allocation of resources to attain institutional goals for job placement.

- Develop and maintain systematic processes for ensuring that the vocational-technical education curriculum is relevant and responsive to the needs of business and industry.

- Provide classes in program planning and evaluation skills to vocational educators for upgrading these areas.

- Provide teacher education programs and inservice education programs designed to impart to teachers an understanding of the vital role they play in job placement.

- Provide graduate education programs designed to prepare and upgrade school principals in working toward job placement as a goal for vocational education. (p. 16)

McKinney and Halasz (1982) also found that postsecondary institutions had higher placement rates where the local labor market has a high demand for labor and in communities of medium size that are supportive of vocational-techncial education.

Analysis

Career planning and placement offices are an integral part of postsecondary institutions. The potential exists for this role to expand, especially in the areas of curriculum and instruction and student outcomes. Career planning and placement professionals can assist in keeping occupational programs relevant and up-to-date. Of the 367 placement director respondents to the Placement Official Survey that provided background information, a portrait of the average placement official emerged. Placement officials responding had an average of 5.5 number of years of experience in placement or career guidance in postsecondary institutions; 26 percent had 1-5 years, 29 percent had 5-10 years, and 37 percent had 10 or more years of experience. The average highest degree held was Master's (by 62 percent of respondents) and 48 percent had a degree in counseling or guidance.

The average age of placement officers was 44 years of age. Forty-four percent were female; 89% were of white, not Hispanic ethnic origin. These data represent the means for self-reported data and provide an overall picture of the placement officers participating in the survey.

One of the research questions guiding the study was: How are curricular decisions made and who is involved in that process? The literature search did not provide any information or insights into the role of career planning and placement officers in the development process for occupational program curricula. When asked to what extent does the placement officer get involved in curricular decision making, 24.1 percent responded that involvement occurs regularly and another 23.8 percent indicated that it has occurred several times, but not regularly. Fifty-two percent indicated that they had never or only occasionally been involved in curricular decision-making. This is a high and unexpected percentage of placement officers not involved in the curricular decision making process. In further evaluation of this data by institutional type, the involvement of placement officials in curricular decision making that did occur happened mostly at vocational-technical institutes (e.g., joint vocational schools).

Another question guiding the study concerned student motivation and choices. A question asked in this area dealt with graduation rates and, aside from education and training, what happens to these students. Placement officers were asked what percentage of program completers and what percent of program non-completers: entered the military? enrolled in a 4-year institution? enrolled in another 2-year college/technical school? entered the labor force full time? Exhibit 6-1 provides the mean percentages in response to each question.

At least one-third of noncompleters and more than one-half of program completers find full-time employment. Of those finding employment, placement officers indicated that most students find employment related to their training. Exhibit 6-2 summarizes these responses. The modal responses for placement officers indicated that 75%-90% of the program completers are placed in jobs related to the training. This high percentage of student placement may influence students to choose one institution over another. This statistic does represent program completers only, and not students that secure employment prior to completing their course of study.

This gives cause to question where the jobs come from that the students are placed in. The placement officers were questioned on effective strategies for developing jobs. Seven percent of those responding indicated that they do not engage in any job development activities. Of those 93% of placement

EXHIBIT 6-1

STUDENT OUTCOMES FOR PROGRAM COMPLETERS AND NONCOMPLETERS

	Outcomes	Program Completers	Program Noncompleters
STUDENTS:	Entering Military Service	3%	3%
	Enrolling in 4-year Institution	18%	9%
	Enrolling in Different 2-year institution	5%	5%
	Entering Labor Force Full-time and Not Attending School	56%	34%

(Percentage represents mean scores for each category)

EXHIBIT 6-2

JOB PLACEMENT RELATED TO TRAINING FOR PROGRAM COMPLETERS

Percentage of Students Placed in Job Related to Training	Percentage of Responses from Placement Officers
Less than 10%	.6%
10% - 25%	2.2
25% - 50%	10.0
50% - 75%	26.6
75% - 90%	40.6
90% - 99%	18.6
100%	1.6

EXHIBIT 6-3

SUCCESSFUL JOB DEVELOPMENT STRATEGIES USED BY PLACEMENT OFFICERS

Strategies for Developing Jobs	Percent finding strategy effective
In-person visits	79%
Telephone contacts	74%
Referrals from faculty/staff at institution	68%
Co-op or internship programs	57%
Community organization memberships	48%
Working with a government agency	43%

officers who do engage in job development activities, respondents indicated those strategies they found to be most effective. The effective strategies are summarized in exhibit 6-3. These percentages indicate a very active role for placement services in developing jobs for and assisting students in the acquisition of those jobs.

When asked to rank a list of six goals for career planning and placement services in their institutions, placement officers responded as follows:

1. Help place students in employment related to their training;
2. Help students plan and prepare for their careers after leaving the institution;
3. Help students with the personal growth and development;
4. Help students plan and prepare for additional schooling;
5. Help students select and schedule courses;
6. Help particular special groups of students such as the handicapped, economically disadvantaged, and limited English proficient progress through the school.

Placement officers put a strong emphasis on assisting students in preparing for careers, securing jobs, and personal growth. Little emphasis is placed on student scheduling or assisting special students to progress through institutions.

In comparison, when the chief administrative officials of institutions were surveyed, 54% indicated it was "very important" to place students in jobs as they leave school. Seventy-six percent indicated it was "very important" to provide training for specific jobs. Administrators appear to want the students trained, but they do not show as high of a concern for job placement.

In responding to the size of the professional staff in the placement office, 40% of the institutions have one full-time person, 21% have one half-time person, and 16% have one less than half-time person. Thirty percent of the institutions have no full-time staff, 73% have no half-time staff, and 74% have no less than half-time staff. Only 13% have two or more full-time professional staff. Regardless of staff size, student access to placement professional staff appears to be very good. Fifty-five percent of respondents indicated that students would typically have no wait--they can walk right in, while another 30% indicated that students would have to wait a few minutes to an hour to see the placement officer.

Exhibit 6-4 summarizes the percentages of students involved in various activities offered by placement offices. The two activities that had high student participation were "training in job seeking skills," where 18% of respondents indicated that 100% of the students participated and "training in resume writing," where 14.2% of respondents indicated that 100% of the students participated. Two activities that were not conducive to student participation were "visits to other postsecondary institutions" and "job shadowing." It was encouraging to note that the statement "have no contact with the placement office" did not receive high percentages from respondents--indicating that most students have at least some contact with the placement office.

In addition to organizing the abovementioned student activities, placement officers are involved in the other institutional activities (see exhibit 6-5). Placement officers are routinely involved in administrative duties, job development, and organizing career activities. Almost half of the placement staff are involved in teaching classes not related to guidance. More than half are routinely involved in updating and obtaining information from records and conferring with instructors or other instructional personnel regarding the placement program.

Case Study Analysis

From the 48 case study site visits, 44 placement officers were interviewed. Four schools did not have a placement function available. From these case studies, a more detailed picture emerged about the function of career planning and placement services.

From the 145 faculty interviewed at case study sites, it was found that most faculty informally include employability skills in their courses. One faculty member in a type 2 institution in the East formalized the process and included "attitude, promptness, hard work, an attempt to recreate the work environment" in the

EXHIBIT 6-4

STUDENT INVOLVEMENT IN PLACEMENT RELATED ACTIVITIES

	Percent of Students Involved										
Student Placement Activities	0	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100
Exploratory work experience programs (e.g., co-op/work study)	15.3	25.1	19.7	14.7	5.9	5.8	3.2	3.3	2.2	2.7	1.9
Career days/nights	30.3	17.8	17.4	.2	3.5	3.0	4.9	3.0	3.0	1.9	3.0
Job site tours or visits (field trips)	21.3	2.5	16.9	8.8	4.4	1.7	3.6	2.1	4.1	2.8	9.3
Visits to other postsecondary institutions	45.6	24.6	12.8	7.9	3.0	2.5	2.5	0.8	0	0.3	0
Job shadowing (extended observations of a worker)	59.6	25.2	8.7	2.4	0.8	0.5	1.4	0	1.4	0	0
Testing and having tests interpreted for career planning purposes (e.g., interest inventories, vocational aptitude tests)	11.2	20.1	15.9	16.2	6.4	4.6	5.5	0.3	4.1	1.7	13.1
Individual counseling sessions	22.0	4.1	13.4	14.2	5.4	7.6	8.3	6.9	5.3	7.9	18.9
Group guidance/counseling sessions	18.9	21.1	18.1	11.0	4.1	4.1	5.2	2.7	3.0	4.4	7.6
Training in job seeking skills	6.0	14.5	10.6	11.7	7.2	4.4	8.3	5.2	3.5	5.2	23.5
Training in resume writing	6.0	16.5	11.0	9.9	6.5	5.2	9.3	6.3	4.4	6.0	18.9
Use of computerized information resources	28.7	18.5	15.9	15.3	6.0	3.6	6.0	1.4	1.6	0.8	2.2
Use of noncomputerized career information resources	9.3	12.6	16.8	16.4	8.0	7.6	10.4	4.2	3.9	3.3	4.6
Have no contact with the placement office	27.9	7.6	12.6	9.8	8.2	5.4	12.1	5.2	3.0	4.6	3.6

*Percents were reported in a continuun and are grouped for ease of reporting.

EXHIBIT 6-5

PLACEMENT STAFF
INVOLVEMENT IN VARIOUS CAMPUS ACTIVITIES

Activity	Level of Involvement*			
	Never	Infrequently	Occasionally	Routinely
-Administrative duties not related to placement or career guidance	3%	15	34	44
-Teaching employability skill or career guidance-related courses	14%	10	33	40
-Teaching classes (nonguidance related)	49%	23	12	13
-Planning for, administering, and interpreting tests	20%	17	25	36
-Updating and obtaining information from records (e.g., permanent records for reports, planning)	1%	2	16	79
-Conferring with instructors or other instructional personnel regarding the placement program	5%	24	30	59
-Directing extracurricular activities	26%	33	27	11
-Directing planned career guidance activities (e.g., career days, plant visits)	5%	16	37	40
-Developing contacts with business and industry	2%	8	22	66
-Meeting with recruiters from other postsecondary institutions or the military	4%	18	41	35
-Working with JTPA and/or JTPA-sponsored agencies and other community-based organizations	10%	18	28	41

*expressed in rounded percentages

classroom. Other informal activities and subjects covered by faculty members included mock interviews, personal presentation, development of professional attitudes, speakers from industry, and interpersonal skills. Several faculty members indicated that formal classes at their institution taught employability skills and felt no need to present the content in their classes.

The career planning and placement offices offered a wide variety of career development programs. Students could develop skills in resume writing workshops, job selling strategy workshops, interviewing strategy workshops, career counseling, testing, or computer-guided testing. Placement officers met with students individually or in groups to establish credential files and counsel students about interests in career areas. Career fairs or workshops, industrial plant tours, and campus speakers were other avenues identified for career identification.

The placement offices were almost evenly divided about follow-up data collection from former occupational students. For those schools collecting follow-up data, the average reported placement rate for occupational students in areas for which they were trained was 74%, with the high being 94% and the low, 60%. One type 2 institution in the West indicated a 73% overall placement rate in the area for which the students were trained. Another 12% were not seeking employment, 14% were unemployed, but seeking positions and 1% were full-time military personnel. Another part of this institution's follow-up survey requested the graduates' perception of the usefulness of the training for their current job. Twenty-four percent identified the training "very good," 41% as "good'" 26% as "average," 4% as "poor," and 7% as "very poor." These statistics have proven to be highly instrumental in assisting this institution to improve it's programs. The reasons given for students not gaining employment ranged from "students can get jobs if they want to work" to "some of these students can get jobs if they would be willing to move." This institution displayed a high degree of concern for improving programs through systematic data collection from former students.

Placement officials interviewed were questioned about follow-up procedures and if information was obtained from employers about the graduates. About one-third of the schools either did not conduct follow-up studies, or had no placement office. Of the other two-thirds, respondents indicated that few employers are contacted; most follow-up occurs through the students or on an informal basis. One type 2 institution in the West region had an outstanding follow-up process. Surveys were mailed every quarter to graduates. Those employers identified by graduates were also surveyed. The process was very organized and systematic. Statistics were generated from the reported data and were broken down by occupational area.

These case studies provided a more detailed image of the programs and activities available on each campus. From the data provided through these interviews, the faculty have proved to be helpful in assisting student with employability skills, although there should be more communication between placement officials and faculty. More career planning and placement offices need to collect and analyze follow-up information so as to better assist institutions and the students.

Recommendations and Conclusions

This study was conducted to assess the curriculum decision-making process and to determine student motivation for enrolling in programs and institutions. Placement officers and the career planning and placement offices from which they operate play an active and important role in the institutional setting. Responses from placement officers indicate that they are less active in the curriculum decision-making process than was anticipated. Sixty percent of the respondents indicated that 75% or more of the program completers found jobs related to their training. With this percentage, it must act as a student motivator for program and institutional choices.

Based on the data collected in this study, the following recommendations are made. It was surprising as to how few placement officers were regularly involved in the curriculum decisionmaking process; more placement officials need to be involved. Placement officials complete a lot of paperwork, but another task must be added, or better attended to: follow-up of students. A number of respondents did not have information on former students-completers and noncompleters. One respondent went so far as to write on the survey that "we don't follow-up on noncompleters." This is a real disservice to students and a poor tactic in terms of losing those students to potential reenrollment.

Placement officers should continue to work with job development strategies and focus on the two that are most successful: in person visits to potential and current employers and making phone contacts. The 7% of placement officials that are not involved in job development should assess the reasons why they are not developing jobs and set up a strategy to become involved in the process of developing jobs.

Placement officers are effectively involving most of the students in some activities. However, an attempt should be made to capture the time and attention of those students who do not make use of the wide variety of placement activities available to them.

Career planning and placement offices provide a link for students as they transition from school to work. Students are furnished a wide variety of activities to heighten their career awareness, to gain skills in preparation for a job search, and to receive support during the actual job search. This role as a resource broker is important in linking the school environment to the world of work.

CHAPTER 7

EMPLOYERS' INVOLVEMENT IN CURRICULUM DECISION MAKING IN POSTSECONDARY OCCUPATIONAL EDUCATION

Catharine P. Warmbrod

Why Involve Employers?

Educators dedicated to preparing persons for the work force have long recognized the importance of interaction with employers and the involvement of employers in planning and conducting instruction. To know what skills are needed, what equipment is being utilized, and how technology is changing in the workplace, frequent and systematic involvement of employers is required. Vocational-technical educators want to know if they and their students have achieved their goals, and follow-up studies of students and with their employers help provide this information.

This study addresses the question of whether the perceived importance of involving employers in curriculum and instruction is acted upon by educators, or whether it is mainly recognized logic and lip service. The accelerated rate of change in the workplace requires that appropriate changes also occur in vocational-technical classrooms and laboratories. Are employers key in bringing about this change, and if so, what are the ways to effectively involve them?

The Carl D. Perkins Vocational Education Act

The recognition of the importance of involving employers is manifest in the section of the 1984 Carl D. Perkins Act that calls for conducting research on "the constructive involvement of the private sector in public vocational-technical education." The underlying assumption is that involving employers will improve vocational-technical education, which will help achieve the purposes of the Act. The purposes of the Act are stated "to strengthen and expand the economic base of the Nation, develop human resources, reduce structural unemployment, increase productivity, and strengthen the Nation's defense capabilities by assisting the States to expand, improve, and update high-quality programs of vocational-technical education and for other purposes."

The Committee for Economic Development (1985) also expressed the belief that the business community should take the lead in helping sort out what vocational education is and what it ought to do. In addition, the Committee indicated that the business community needs to see that vocational education is well equipped, delivers quality instruction, and graduates employable students.

The 1984 Carl D. Perkins Act offers the business community the opportunity to accomplish these goals at national, state, and local levels. The Act specifies that private industry will represent a majority on the National Council on Vocational Education. This aids communication and coordination on the national level between business and vocational education. Such dialogue helps vocational education be more responsive to the changing needs of labor markets. State Councils on Vocational Education are also required to have majority representation by employers and union leaders. This will assist the private sector in monitoring the delivery and results of existing programs. Technical Committees comprised almost entirely of employers are mandated to advise state boards of education on various aspects of vocational education. These committees working with educators advise state boards on needed curriculum changes and identify priority occupational areas within a state (Committee for Economic Development 1985). These legislated vehicles enable the private sector to make substantive contributions to the occupational education of youth and adults.

Excellence-in-Education Movement

Numerous national reports have been issued by prestigious commissions and task forces that call for a national effort to improve the quality of public education and to effect changes that will lead to excellence. Included in the bodies that have issued these reports are the National Commission on Excellence in Education, the Education Commission of the States Task Force on Education and Economic Growth, the Carnegie Commission, the Twentieth Century Fund, and the Committee for Economic Development. One of the recommendations to help get the desired changes suggested in most of the reports is for the involvement of the private sector in public education. The collaboration between businesses and schools is seen as a way to benefit both and to achieve outcomes that could not be reached independently. Involving employers in the educational process is seen as one way to improve the quality and outcomes of education.

Concerns raised about the quality of education and its impact on the economy have emphasized the need for cooperation between postsecondary education and the private sector. The lack of cooperation results in a poorly trained labor force (Thurow 1974). A broader view of education and its application in the workplace, which extends the provision of education beyond the school itself, calls for cooperation in which all parties have a strong voice in defining education and training. The Education Commission of the States' report (1983) contains a recommendation that illustrates this well.

> We strongly recommend that leaders outside the traditional educational system--especially business leaders--take specific steps to help improve the schools. They, along with labor leaders and members of the scientific, engineering, and technical professions, must become more active in public education. They must communicate the skills that are needed in the workplace--and thus help educators define the standards that the schools should meet. (p. 35)

The American Enterprise Institute for Public Policy Research sponsored a conference in 1983 on Barriers to Private Sector-Public School Collaboration. The proceedings of this conference resulted in the book, The Private Sector in the Public School: Can It Improve Education? The report points out that the private sector is already very much involved with public schools in a variety of ways: private foundations offer financial support; partnerships join individual schools and businesses; local school systems collaborate with industry; and industry provides training, internships, and summer jobs for teachers and students and give administrative and financial assistance. The question these rapidly increasing partnerships raise, as does the national school excellence reports, is what potential does such collaboration really have for improving the quality of public education.

The American Enterprise Institute conference examined this question, as well as looking at barriers and incentives for private sector-public school collaboration. The paper giving a labor-education perspective, presented by Maurice Leiter, identified several incentives for collaboration. He stated that a corporation doing business in a community has a strong incentive to strengthen public education, create stability in the community, create a flow of employees, and encourage personnel to live in and contribute to the community. It is common belief that a better-educated and skilled population will provide a better work force. Thus, it is believed that resources invested in human development will contribute to the economic well being of all. (p. 19) This theme was also carried forth by Marsha Levine at the conference with her assertion that much thought is being given to the relationship between education and economic growth, and that business and industry recognizing this relationship are seeking ways to affect quality in public education. Business-education collaboration is one attempt to toward that end. (p. 14)

Postsecondary Occupational Education's Linkage with Employers

Postsecondary occupational education has assumed national importance as new scientific discoveries and the rapid application of new technological developments have created a growing need for well prepared technicians. A large share of these technicians are receiving their education at two-year colleges. The American

Association of Community and Junior Colleges reports in its 1986 statistical directory that nearly half of two-year college students are enrolled in occupational programs. In addition, over half a million students (617,053--weighted) participated in special business/industry programs.

Historically, technical education was thought of as the preparation of paraprofessionals in engineering, industrial, and scientific related occupations. Today with technological and scientific developments applied to most areas of work, technicians are supporting and assisting professionals and managers in a full spectrum of occupational areas. These technical programs are found in such diverse fields as business, agriculture, allied medical, health, electrical-electronic, environmental control, public service, computer science, information processing, and industrial processes--to name a few.

In an effort to have a faculty that is in touch with current processes and equipment in each technical field, many part-time faculty members are hired from business and industry. Approximately 55 to 60 percent of faculty members are part-time instructors. It is a constant challenge for the colleges to keep these programs, and consequently, their faculty members, up to date with changes in their technology. It is also challenging to maintain state-of-the-art equipment when advancements in technology are continually occurring.

The approach taken by postsecondary occupational education institutions to meet the demands placed upon them by employers and the community is to involve business and industry in the educational process. The primary vehicle for this involvement has been institutional and program advisory committees. These committees, composed primarily of employers, advise the college or the department on their labor needs, skills, and knowledge required for various levels and kinds of jobs, equipment and processes used, future changes projected, and provide feedback on how well their graduates perform as new employees.

Business and industry also gets involved in the educational process as they provide exchange programs for faculty, cooperative education work stations for student interns, and often provide equipment and materials for use in classrooms and laboratories. Employers get involved because postsecondary occupational education contributes to the effectiveness and productivity of their pool of employees. A caution, however, is put forth by Marsha Levine (1983) that whereas schools have education as their central purpose, corporations view education as a means to an end. Thus, their views and purposes may differ.

Perceived Benefits of Involving Employers

For employers and colleges to be willing to put the time, energy, and resources into developing cooperative working relationships, they must see how they will benefit. This thesis was underscored by Beder and Darkenwald (1979):

> A significant increase in coordination and cooperation among public institutions cannot be expected in the absence of tangible incentives . . . Institutions cooperate with one-another only on the basis of a quid pro quo. Each must stand to gain significant benefits from the relationship. (p. 159)

Exemplary programs and practices of industry and education collaboration across the country were analyzed by Warmbrod, et al. (1981) to ascertain what made them successful, what common elements they shared, and the distinct qualities of successful programs. One of the guidelines for industry-education cooperation based on this study is--

> There must be recognition of mutual need. To warrant the time, effort, and resources required for collaboration, the need and benefits must be clearly perceived. The vision and persistence of interested parties is required. It takes the dedication of someone in both education and industry to make it work. (p. 121)

In a national study on how two-year colleges and industry can collaborate in retraining and upgrading workers, one of the critical elements and recommendations resulting from this study is that companies must see how they will benefit from using the industry training services of the college. Profit is the "bottom line" for industry, and colleges must demonstrate that they understand and support that industry priority. (Warmbrod and Faddis 1983)

What are the benefits that postsecondary institutions and employers seek in collaborating to develop, maintain, and conduct occupational training, retraining, and upgrading programs? The following lists enumerate the perceived benefits to be gained.

Benefits to postsecondary institutions:

- Programs kept up to date with information from industry on the skills and knowledge needed for persons in certain levels and types of jobs
- Faculty kept up to date through faculty-industry exchange programs and through summer employment programs for faculty
- Equipment, processes, and materials kept current through donations from employers
- Access to training stations for cooperative education students

- Better and increased placement of graduates
- Increased community support
- Significant contribution to the local economy in terms of the value of human capital

Benefits to employers:

- Access to a pool of well prepared workers
- Economical source of training to retrain and upgrade employees
- Well trained employees contribute to increased productivity
- A skilled work force enables the company and the country to be competitive
- Well trained employees contribute to company profits

Advisory Committees

Advisory committees have been the major vehicle through which employers are involved in vocational-technical curriculum and instruction decision-making. Such committees, composed of representatives of business and industry, have been an important part of public vocational and technical education since the passage of the Smith-Hughes Act in 1917. (Dunn and Hoerner 1984)

Business has an important stake in improving vocational education. The business community was very influential in getting the federal government to pass the 1917 Smith-Hughes Act. Recent major surveys by the National Association of Manufacturers and the United States Chamber of Commerce indicate that this support continues. (Committee for Economic Development 1985)

Although the need for and value of local advisory councils were a part of the early philosophy of vocational education, they were used sparingly until the late 1950s. Economic and societal conditions after World War II fostered the use of advisory committees. Growth in both technology and in educational institutions, along with greater citizen involvement in education, expanded and strengthened the use of advisory committees. Changes in public education, such as expanded clientele and increased costs, required a more active relationship between vocational-technical education and the community. (Cochran, Phelps, and Cochran 1979)

Several states led the way with Wisconsin, Pennsylvania, and New York passing legislation mandating the establishment of local advisory councils. The federal government established a permanent

National Advisory Council on Vocational Education, and state advisory councils were mandated as a condition for receiving vocational education funds. The 1976 Vocational Education Amendments provided further support for the use of local vocational education advisory committees by requiring their establishment to receive funding. This was followed in 1984 by the previously described Carl D. Perkins Act with its emphasis on involving the private sector in the educational process.

Advisory committees are now a common connecting link between schools and the community, used extensively at both the secondary and postsecondary levels. (Light 1982)

Role and Function of Advisory Committees

Advisory committees are organized to advise educators on the world of work and are composed of persons outside the educational field with specific occupational knowledge and expertise. These committees are important to the establishment and maintenance of up-to-date educational programs. The committee's role is purely advisory in nature, not administrative or policymaking. (Handbook for Instructors and Advisory Committee Members, n.d.) These committees provide effective lines of communication between educational institutions and employers. Advisory committee members assist schools and colleges in assessing current status and identifying future needs.

There are three major categories of advisory committees:

- General Advisory Council. This group assists in the development and operation of all vocational-technical programs in the school or college. They provide such services as identifying needs of individuals and of the community, assessing labor market requirements, identifying long range goals, contributing to programs, developing community understanding and support, and building respect for and the prestige of the occupational programs in the college.

- Program/Department Advisory Committees. Another standing or continuous committee, this type of committee's primary responsibility is to assist in developing and operating relevant and effective occupational programs. Members on this type of committee are selected for their expertise and knowledge in a specific program area. Members include employers and skilled workers.

- Ad Hoc Advisory Committees. These committees are established to meet special needs and, therefore, are not permanent in nature. The composition, size and duration are determined by need. The Ad Hoc Committee may be established to serve the general advisory council, a program advisory committee, or the college administration. (Handbook for Advisory Committees in Occupational Education, 1979)

At the postsecondary education level, the advisory committee plays an important role in searching for new ways to bring the school and the world of work closer together. The following 13 functions of the advisory committee are those most frequently reported by occupational deans, vocational directors, instructors, and others having a close working relationship with advisory committees:

- Assessing occupational needs
- Evaluating curricula
- Recruiting students
- Placing students
- Establishing training stations for cooperative and work experience programs
- Setting criteria and recommending instructors
- Planning equipment and facilities
- Identifying community resources
- Reviewing programs
- Arranging field trips
- Providing speakers
- Acting as liaison between labor and management
- Fostering community public relations (Riendeau 1977)

The various handbooks and guides for advisory committees recommend making a special effort to include representatives from organized labor. It is essential to have such representation when programs prepare students for entry or upgrading in apprenticeable trades. Local Joint Apprenticeship and Training Committees often take an active advisory role.

Effectiveness of Advisory Committees

Although there is general consensus and strong belief that involvement of the private sector, particularly through advisory committees, is important for program improvement and maintaining quality programs, there is high skepticism that advisory committees are effective.

This view is expressed by Garrison (1983, p. 92) when he says, "For far too long advisory committees have been mere window dressing." He goes on to exhort educators to use their advisory committees for they possess a wealth of essential information pertaining to new technology, equipment, texts, job requirements, and costs. These committees must be properly used to be effective.

A report of a California conference on A Working Partnership for 1993: Linking Community Colleges and Business (1983) cites their finding on an important cause of ineffectiveness. The critical flaw they cite is that when employers do participate in curriculum planning and program development, the companies may choose representatives who are not able to attack the problem with solid technical advice or resources. They encourage private sector involvement at three levels: chief executive office who can make a commitment to cooperate and provide funding; technical employees who will assist in curriculum design, staffing, and provision of equipment; and personnel officers who make hiring decisions.

Cross (1981) puts forth the thesis that the advisory board model probably will work only as long as authority is truly shared and respect and trust pervade the negotiations. The arrangements are often loose and may not offer a strong enough voice to industry.

Good research studies evaluating advisory committees are sparse. The findings and conclusions that do exist from these studies give insights leading to recommendations, but a comprehensive examination of the state of the practice is lacking. The findings generally reveal that advisory committees as used are not effective.

Dunn and Hoerner (1984) conducted a study of management practices associated with effective general advisory committees for postsecondary vocational education. The investigators found disparity between committee management practices and those effective management practices described in relevant literature. They believe there may be very few committees of the type studied that would be considered effective. They recommend that postsecondary occupational educators make a stronger commitment to using effective management practices to get the most value from their advisory committees. This belief is supported by Rippey and Vickers (1978) who state that advisory committees often prove ineffective because the committee is poorly organized with sporadic schedules of meetings.

A study to determine the effectiveness of local postsecondary advisory councils in Iowa was conducted by Schultz, Watson, and Giese (1980). This study also revealed a need for local councils to strengthen their management or "operational" activities. The researchers suggested that the ineffectiveness of those councils may be a reflection of inadequate orientation of the members to the roles and functions of advisory councils.

A study of advisory committees in Florida (Danenburg 1975) examined the extent of use and the effectiveness of advisory committees in that state. In regards to effectiveness, the investigators looked at practices that are characteristic of effective advisory committees and the perceptions of advisory committee members as to their effectiveness. The findings showed a significant discrepancy between committee member's perception of their committee's effectiveness and the extent to which the committees are actually performing effective practices.

The impact of advisory councils and committees in South Carolina was investigated by Phillip Latham (1981). Information was gathered from 891 advisory members serving on advisory committees and councils for 49 area vocational centers, 6 of which were not using advisory councils. Analysis of the advisory member responses indicated that a majority of the members were not having an impact on vocational education programs. Seventy percent of the responses were classified as negative or neutral responses (no impact), while 30 percent of the advisory members reported that their committees were having an impact on vocational programs. Impact was measured by implementation of advisory committee recommendations to vocational education administrators.

Although most of the research found advisory committees to be generally ineffective, the researchers stated the belief that if good management practices in regard to advisory committees were instituted, then the committees would carry out their functions well, be effective, and would fulfill the reason for their existence. Thus, belief in the concept of advisory committees remains strong, even though the results are disappointing.

Findings of Postsecondary Occupational Education Delivery Study

A focus of the study is the nature and extent of employer involvement in curriculum and instruction decision making. The sources of data are focused questions on the mail questionnaires completed by department chairpersons and by instructors at colleges in the sample. Since a major vehicle for the involvement of the private sector in public education is the advisory committee, information was gathered about the use and influence of these advisory groups.

Advisory Committees

An examination of the extent of use, composition, and influence of advisory committees was made. Eighty-two percent of the department chairpersons said their department/program had an advisory committee. Within each type of institution, the percent of colleges or schools that had advisory committees is as follows:

type 1, 85%; type 2, 95%; type 3, 55%.[1] The occupational programs at 4-year institutions are far less likely to have an advisory committee.

There was great variance as to the number of members contained on the advisory boards or committees. However, the vast majority, 73 percent, contained between 6 to 15 members. There was not marked differences between the types of institutions. The mean for the number of members is 11.29.

In response to questions concerning the frequency of advisory board meetings, 85.5 percent of the boards meet at least once a year. Only 1 percent meet at least once a month, while 44 percent meet less often than once a month, but more often than once a year. Nearly 13 percent meet only on an as needed basis. There was not great variance between types of institutions on frequency of meetings.

When chairpersons were asked to specify the number of members on their board that was from business or industry, answers ranged from 1 to 80. Nearly 70 percent of all advisory boards had over three-quarters of their members from business and industry. While nearly 80 percent of type 2 institutions had over three-quarters of their members from business and industry, this was true for only 65 percent of type 1 institutions and for 62 percent of type 3. The mean for the number of members from business and industry is 9.34.

In comparison, only 1.26 percent of the advisory boards had representatives from labor comprising over three-quarters of their board. Eighty-four percent of the advisory boards had a labor composition of less than 15 percent. In fact, 77 percent of the chairpersons responded that the advisory board for their program had no representatives from labor. The mean for the number of members on a board from labor is less than 1 (.98).

Chairpersons were asked to rate the influence of their institution's advisory board on establishing or revising the curriculum. The rating went from (1) a great deal, (2) some, (3) only to a minor extent, to (4) none, not applicable. Twenty-four percent rated their institution's advisory board as having a great deal of influence, while 40 percent said their board has some influence on curriculum. Thirty-six percent indicated little or no influence. Both type 1 and type 2 institutions showed institutional advisory boards as having a great deal or some influence, this being 65 percent and 75 percent respectively, while with type 3 institutions, this was only 43 percent.

Chairpersons were also asked to rate the influence of business and industry representatives through their program advisory committees on curriculum matters. Here the impact was rated higher. Thirty-seven percent of the chairpersons said their program advisory committee exerted a great deal of influence on curriculum and 42 percent said it had some influence. Only 7 percent said business and industry representatives on advisory committees had no influence on curriculum. Again, it is in type 1 and 2 institutions that advisory boards were shown to exert considerable influence on curricula. The percentage response from type 3 institutions for a great deal or some influence is less than half that from types 1 and 2. This is to be expected because of the lower likelihood of having an advisory committee in type 3 institutions. See exhibit 7-1 for the data on this topic.

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[1] As documented in Chapter 2, type 1 institutions are community colleges, type 2 institutions are technical schools, and type 3 are universities and colleges.

Similar questions were asked department chairpersons regarding the influence of institutional and program advisory boards, but this time inquiring about their influence on determining instructional methods. The vast majority of responses (65 percent) showed institutional advisory boards to have little or no influence, leaving a 35 percent response showing some or a great deal of influence.

Program advisory boards were reported to have greater influence on determining instructional methods than were the institutional advisory boards. The responses from chairpersons showed 44 percent reported their program advisory committees had some or a great deal of influence as compared to 35 percent for the institutional boards.

As in matters of curriculum, both types of advisory boards in type 2 schools had greater influence on instruction than in type 1 or 3 colleges. The figures for both institutional and program advisory boards in regards to influence on instructional method are found in exhibits 7-2 and 7-3.

There is a positive correlation between responses on the influence on institutional advisory boards on curriculum and their influence on instruction. This positive correlation is indicated by a Pearson product moment correlation coefficient of .56. Generally, chairpersons indicate that the degree of influence of institutional advisory boards is similar on curriculum and on instruction.

There is also a positive correlation of responses on the degree of influence of business and industry representatives on program advisory boards as it relates to curriculum and to instruction. The Pearson product moment correlation coefficient of .51 indicates that chairpersons tended to identify similar degrees of influence on curriculum as on instruction by their program advisory boards.

EXHIBIT 7-1

INFLUENCE OF PROGRAM ADVISORY COMMITTEES ON CURRICULUM

	Percentage Response by Institutional Types		
Influence	Type 1	Type 2	Type 3
A Great Deal	41%	43%	17%
Some	44	41	40
Minor Extent	9	14	28
None	6	2	15

EXHIBIT 7-2

INFLUENCE OF INSTITUTIONAL ADVISORY BOARDS ON INSTRUCTION

	Percentage Response by Institutional Types		
Influence	Type 1	Type 2	Type 3
A Great Deal	5%	12%	2%
Some	28	39	16
Minor Extent	38	29	37
None	29	20	45

JTPA/PIC

The message from the responses by the chairpersons on the influence of JTPA/PIC on curriculum and instruction in postsecondary institutions is clear: the influence is negligible. In regards to curriculum, 89 percent of the responses said the JTPA/PIC had minor or no influence. The influence was even less on instruction, where 90 percent of the responses reported little or no influence. See exhibits 7-4 and 7-5 for a breakdown of responses. The Pearson product moment correlation coefficient of .75 shows the very high similarity of responses in regards to curriculum and to instruction.

EXHIBIT 7-3

INFLUENCE OF PROGRAM ADVISORY COMMITTEES ON INSTRUCTION

	Percentage Response by Institutional Types		
Influence	Type 1	Type 2	Type 3
A Great Deal	10%	21%	3%
Some	35	35	24
Minor Extent	35	29	33
None	20	15	40

EXHIBIT 7-4

INFLUENCE OF JTPA/PIC ON CURRICULUM

Influence	Percent
A Great Deal	1%
Some	10
Minor Extent	26
None	63

EXHIBIT 7-5

INFLUENCE OF JTPA/PIC ON INSTRUCTION

Influence	Percent
A Great Deal	0%
Some	10
Minor Extent	18
None	72

An examination of response by institutional types reveals that curriculum in type 3 institutions was practically unaffected by JTPA/PIC. The greatest effect indicated was in the "some" category and that was from only 3 percent of the responses. The greatest influence by JTPA/PIC on curriculum was shown in type 2 institutions, where 1 percent of the responses reported a great deal of influence and 17 percent said some influence. Type 1 institutions showed 2 percent in the "great deal" category and 8 percent in "some." When the influence of JTPA/PIC on instruction was analyzed by institutional types, the relationship of the degree of influence to institutional type was practically the same as it was in regards to curriculum.

Employers' Influence on Students' Work Experience Grade

Chairpersons were asked to respond to questions regarding the influence of employers, who supervise the work experiences of their students, on the grades those students receive for their work experience. The choices presented were that employers recommend grades to the coordinator, employers assign grades, or employers and coordinators jointly agree and assign students' grades. Fifty-five percent of the responses showed that the schools did not have work experience programs or that the employers had no say for the grades the students receive for their work experience. Only 5 percent of the responses showed that the employers assigned grades. The approach most often used was for employers to recommend grades to the coordinator. See exhibit 7-6 for the percentage responses to these questions on employers' influence on students' work experience grades. Responses by institutional types were very similar.

EXHIBIT 7-6

EMPLOYERS' INFLUENCE ON STUDENTS' WORK EXPERIENCE GRADES

	No Work Experience Programs	No Influence	Recommend Grades	Assign Grades	Jointly Agree & Assign Grades
Percent Response	43%	13	23	5	16

Facilities and Equipment Donated by Employers

Chairpersons were asked to estimate the value of facilities and equipment donated to their program by business and industry over the past three years. Thirty-nine percent said no donations were received over that period of time. Twenty-seven percent of the responses reported the value of donations they received to be between $1 and $5,000. Only 10 percent reported donations worth over $50,000. See exhibit 7-7 for the percentage of responses in each dollar value category. Responses from type 3 institutions revealed that they received more donations and higher value donations than did type 1 and 2 institutions. The percentage response shows that type 2 institutions received more donations than did type 1, but that the donations received by type 1 institutions were of greater value.

EXHIBIT 7-7

VALUE OF FACILITIES AND EQUIPMENT
DONATED OVER PAST THREE YEARS

	No Donation	$1-5,000	$5,000-10,000	$10,000-25,000	$25,000-50,000	$50,000-100,000	over $100,000
Percent Response	39%	27	10	9	5	5	5

Faculty Reports on Use of Advisory Group and Employer Surveys for Curriculum Input

Faculty members were asked to respond to a five-point scale (1 = None to 5 = A Great Deal) on the use of technical advisory groups and surveys of local employers in determining the goals, content, and development of the curriculum of the program in which they teach. Technical advisory groups were shown to have considerable input into the curriculum. Fifty-nine percent of the responses by faculty were in the top two categories on the high end of the scale indicating that technical advisory groups were used extensively in curriculum matters. Surveys of local employers were used almost as much, for a 54 percent response in the top 2 categories was received. See Exhibits 7-8 and 7-9 for the response by faculty on the use of technical advisory groups and surveys of employers in curriculum decision making. On both questions, there was great similarity of response by type 1 and 2 institutions. Type 3 institutions showed less use of technical advisory groups and employer surveys.

EXHIBIT 7-8

FACULTY RESPONSE ON THE USE OF TECHNICAL ADVISORY GROUPS IN CURRICULUM MATTERS

	None (1)	2	3	4	A Great Deal (5)
Percent Response	11%	10	20	25	34

EXHIBIT 7-9

FACULTY RESPONSE ON THE USE OF SURVEYS OF LOCAL EMPLOYERS IN CURRICULUM MATTERS

	None (1)	2	3	4	A Great Deal (5)
Percent Response	11%	13	22	28	26

Faculty Response on Influence of Business, Industry, and Labor on Program

Faculty members were asked to report on the extent of influence that representatives of business, industry, and labor (B-I-L) had on various aspects of curriculum and program in the faculty members' department. The faculty member was asked to respond to a five-point scale going from (1) Very Little Influence to (5) Considerable Influence.

Determining curriculum goals and objectives. There was a well spread, rather even response across the five-point scale when faculty responded to the influence of B-I-L in determining curriculum goals and objectives. The response ranged from 17 percent for (1) very little influence to a mid point (3) of 26 percent to (5) considerable influence at 23 percent. In a breakdown by institutional type, type 3 institutions were least influenced on curriculum goals by B-I-L, with types 2 and 3 institutions somewhat comparable, but with type 2 institutions being influenced the most.

Determining curriculum content. Faculty members gave B-I-L credit for influencing curriculum content. The top two categories toward "considerable influence" were marked by 41 percent of the faculty to represent the degree of influence on curriculum content by B-I-L. The largest response was in the middle category with a 28 percent response. As in the preceding question on curriculum goals, B-I-L had less influence on curriculum content in type 3 institutions. Type 1 and 2 institutions were again similar in response, with B-I-L having the most influence in type 2 institutions.

Assessing relevance and currentness of curriculum. A 49 percent response from faculty in the top two categories toward "considerable influence" reveals the influence of B-I-L's involvement in assessing relevance and currentness of curriculum. Twenty-six percent responded in the bottom two categories showing that in their institutions, B-I-L have very little influence on curriculum relevance and currentness. A breakdown of data by institutional types is shown in exhibit 7-10.

Recommending programs to be offered or deleted. Responses from 40 percent of the faculty were in categories 4 and 5 showing considerable influence by B-I-L representatives on their recommendations of whether programs should be offered or deleted. The largest number of responses was in the middle category with a 26 percent response. The range of percentage of responses in each category was small, only ranging from 15 to 26 percent. Again, B-I-L have much more influence on curriculum decisions in type 1 and 2 institutions than in type 3.

EXHIBIT 7-10

FACULTY RESPONSE ON B-I-L'S INFLUENCE IN
ASSESSING RELEVANCE AND CURRENTNESS OF CURRICULUM

Degree of Influence	Percentage Response by Institutional Types		
	Type 1	Type 2	Type 3
(1) Very Little Influence	15%	9%	25%
(2)	9	8	15
(3)	27	24	25
(4)	26	31	25
(5) Considerable Influence	23	28	10

Providing/developing learning or training sites. In responding to the question of the influence of B-I-L in providing and developing work experience training sites, there were over twice as many responses from faculty at the low end of the influence scale (52 percent) than at the high end of the influence scale (25 percent). This response rate closely reflects the information provided by department chairpersons on their questionnaire when 55 percent of them reported that their schools or colleges did not have work experience programs. There was great similarity of response by institutional types.

Identifying changes needed in training due to technological advances. The responses from faculty identifying the degree of influence of B-I-L on identifying the changes needed in training due to technological advances are very similar to their responses on assessing relevance and currentness of curriculum. Strong correlation of responses on the two questions would be expected since the two questions are closely related. Forty-eight percent of the respondents indicated B-I-L influence in the top two categories at the high influence end of the scale. Again, the mid category showed 25 percent response. Response by institutional types was similar to the other questions with the influence of B-I-L much stronger on type 1 and 2 institutions.

Providing equipment and supplies. B-I-L exerted little influence on postsecondary institutions regarding their providing equipment and supplies. Faculty responses showed 65 percent reporting very little influence (categories 1 and 2). Only 5 percent specified the top category (5) of considerable influence. There was great similarity of response by all three institutional types. The response on this question correlates positively to the response on the question provided department chairpersons on the value of facilities and equipment donated over the past three years. A seven point scale covered the dollar amount of donation. The percentage response on the dollar amount of donation is very similar to the percentage response on the degree of B-I-L influence.

Affirmative action concerns. A seventy-two percent faculty response in categories 1 and 2 at the "very little influence" end of the scale reveals the lack of B-I-L impact in the affirmative action area. There was only an eight percent response in the two categories at the high end of the influence scale. Although influence was negligible in all categories of institutions, it was the weakest in category 3 colleges.

Conducting Interviews to Determine Employer Satisfaction

Faculty were asked whether they or others in their program during the past three years had systematically conducted interviews of employers to determine their satisfaction with employees who were former students in their program. They were asked to respond on the following four point scale: (1) no; (2) yes, once; (3) yes, twice; and (4) yes, three times. Thirty-eight percent responded that interviews of employers had not been conducted during the past three years. The responses in the other categories are: once, 20 percent; twice, 12 percent; and three times, 30 percent. Thus, in a majority of responses, follow up on employer satisfaction did occur. However, a 38 percent response showing no such follow up is sufficiently large to indicate a need for improvement of practice in this regard. Type 2 institutions were much more active in follow up with employers than were types 1 and 3. The response by type of institution is shown in exhibit 7-11.

Currentness of Equipment and Materials in Program

Faculty were asked to rate the degree of currentness of the equipment and materials used in the occupational program in which they teach. The four point scale to which they responded is: (1) very current, up-to-date; (2) current, but not the latest; (3) somewhat dated, not outmoded; and (4) very dated, outmoded.

EXHIBIT 7-11

FOLLOW UP ON EMPLOYER SATISFACTION WITH FORMER STUDENTS OF PROGRAM

	Percentage Response by Institutional Types		
Degrees of Influence	Type 1	Type 2	Type 3
(1) No	41%	25%	49%
(2) Yes, Once	21	17	21
(3) Yes, Twice	13	14	9
(4) Yes, 3 Times	25	44	21

Their response identifies that on the whole, postsecondary occupational programs are using equipment and materials that are up to date. Eighty-one percent of the faculty responses said their equipment and materials were either very current or current. See exhibit 7-12 for this report. Responses by institutional types were very similar. In comparing the faculty responses to this question with chairperson responses to the question on the value of equipment donated by business and industry, it is clear that the identified currentness of equipment and materials is due only to a minor extent to that donated by business and industry.

EXHIBIT 7-12

CURRENTNESS OF EQUIPMENT AND MATERIALS IN POSTSECONDARY OCCUPATIONAL PROGRAMS

	Currentness	Percent Response
(1)	Very current, up-to-date	38%
(2)	Current, but not the latest	43
(3)	Somewhat dated, not outmoded	16
(4)	Very dated, outmoded	3

Summary and Conclusions

The responses from the department chairpersons and from the instructors on their respective questionnaires provide important data on the nature and extent of employer involvement in curriculum and instruction in postsecondary institutions. The data include information on involvement through such vehicles as advisory committees, JTPA/PIC, surveys, and employer follow-up.

Extent of Involvement

In the examination of the extent of use, composition, and influence of advisory committees, 82 percent of the department chairpersons reported that their program had an advisory committee. The average number of members on these advisory committees is 11, and 85 percent of these committees met at least once a year. Nearly 70 percent of all advisory groups had over three-quarters of their members from business and industry. In comparison, 77 percent of the chairpersons responded that the advisory board for their program had no representatives from labor. The mean for the number of member on a board from labor is less than 1 (.98).

Responses from faculty members showed technical advisory groups to have considerable input into the curriculum. Fifty-nine percent of the responses by faculty were in the top two categories on the high end of a five-point scale indicating that technical advisory groups were used extensively in curriculum matters. Surveys of local employers were used almost as much, for a 54 percent response in the top two categories was received.

When faculty were asked whether there was systematic contact with employers to determine their satisfaction with employees who were former students in their program, 38 percent responded that interviews of employers had *not* been conducted during the past three years. Although a majority did report some follow-up, a 38 percent response showing no follow-up reveals a need for greater systematic feedback from employers.

Influence of Involvement

Chairpersons rated the influence of their institution's advisory board on establishing or revising the *curriculum*. A little over one-third said their board had little or no influence. Twenty-four percent rated their institutional advisory boards having a great deal of influence. These boards were strongest in type 1 and 2 institutions.

The influence on curriculum matters of business and industry representatives on *program* advisory committees was rated much higher than on institutional boards. Seventy-nine percent of the chairpersons said their advisory committees had a great deal or some influence on *curriculum*. Again, it is in type 1 and 2 institutions that advisory boards were shown to exert considerable influence on curricula.

Similar questions to those on curriculum were asked department chairpersons on the influence of institutional and program advisory boards on determining *instructional methods*. There is a positive correlation between responses on the influences of institutional and program advisory boards on curriculum and on instruction. This positive correlation is indicated by a Pearson product moment correlation coefficient of .56 for institutional advisory boards and .51 for program advisory boards, revealing similar degrees of influence on curriculum and on instruction.

The influence of JTPA/PIC on curriculum and instruction is in strong contrast to the influence exerted by program and institutional advisory boards, for the influence of JTPA/PIC is negligible. Eighty-nine percent of the chairpersons said JTPA/PIC had minor or no influence on curriculum, and 90 percent reported the same in regards to instruction.

Employer's impact on curriculum and instruction through the donation of facilities and equipment was also limited. Thirty-nine percent of the chairpersons said no donations were received from business and industry over the past three years. Donations of only $1 to $5,000 over this three year period were reported by 27 percent of the respondents.

Faculty members were also asked to report on the extent of influence of business, industry, and labor (B-I-L) on various aspects of curriculum and program in the faculty member's department. Faculty members gave B-I-L credit for assessing relevance and currentness of curriculum and in determining curriculum content. In regards to recommending programs to be three years. Although a majority did not report some follow-up, a 38 percent response showing no follow-up reveals a need for greater systematic feedback from employer.

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Faculty members were also asked to report on the extent of influence of business, industry, and labor (B-I-L) on various aspects of curriculum and program in the faculty member's department. Faculty members gave B-I-L credit for assessing relevance and currentness of curriculum and in determining curriculum content. In regards to recommending programs to be offered or deleted, the responses from the faculty members were evenly spread across a five-point scale indicating degree of influence. Faculty members credit B-I-L for having influence in identifying changes needed in training due to technological advances. Two areas in which B-I-L exerted little influence are in providing equipment and supplies and in affirmative action concerns.

Faculty rated the equipment and materials used in their occupational program generally to be up-to-date. Eighty-one percent of the faculty responses said their equipment and materials were either very current or current. This currentness is not due to B-I-L donations of equipment, for as previously reported, responses to a question on this topic revealed limited contributions by B-I-L.

Conclusions and Recommendations

The data collected in this study provide a good view of current practice on the nature and extent of involving employers in curriculum and instruction matters in postsecondary institutions. A major limitation of the study on this topic is that the data are confined to self-reported perceptions of department chairpersons and faculty members. It is important to hear from the employers served by each college on the same questions responded to by the educators. We need to hear from employers on the extent of their involvement in curriculum and instruction in postsecondary institutions and of their influence through that involvement.

An important next step is to identify criteria to measure impact of employer involvement in curriculum and instruction and then to apply these criteria to measure impact. A comparison of employer impact data with educator perceptions would reveal both the work needing to be done and the barriers to be overcome.

The current data reveal that employers are involved in many aspects of curriculum and instruction and they are perceived as having influence. However, it is also clear that this involvement is not as widespread or influential as most vocational-technical educators would like to see. Advisory committees are established for a large majority of postsecondary occupational programs, but the difference these committees make is unknown.

A majority of college occupational programs do not have cooperative education or internships as part of their educational experience. Such experiential education in business and industry is receiving much attention today as being a way to improve and strengthen occupational programs. Thus, this presents an excellent opportunity to further involve business and industry in a meaningful way in postsecondary occupational curricula.

The 39 percent response of chairpersons reporting that their programs received no donations of equipment from business or industry the past three years signals another way B-I-L can contribute to the improvement of occupational programs in postsecondary institutions. Through strengthening their relationships with employers, department chairpersons can make sure that employers understand the needs of the occupational program and the benefits derived by employers from contributing equipment and materials to the program.

The practice of following up on employer satisfaction with graduates should be increased. In 38 percent of the cases, interviews of employers had not been conducted during the past three years. Systematic follow-up with employers has the potential for continual program improvement, increased placement opportunities, and closer relationships with and support from employers.

This major postsecondary curriculum study based on a large random sample of postsecondary institutions and occupational programs gives a full view of the nature and extent of employer involvement in postsecondary occupational programs today. The data from this study give direction for further efforts to involve employers and point toward additional research that is needed.

CHAPTER 8

CURRICULUM AND INSTRUCTIONAL DECISION MAKING IN POSTSECONDARY OCCUPATIONAL EDUCATION INSTITUTIONS

George D. Dean

Postsecondary institutions are complex decisionmaking organizations. To understand what influences program decisions, many factors must be identified and analyzed. Three broad categories of influential factors have been chosen for this study. One category is the influence of various individuals and groups on program decisions. The second important category is the influence placed on the mission and goals of the institutions. The third category is the influence of available resources.

This chapter presents a framework for understanding curriculum and instruction decision making and reports an analysis of the influence of individuals, goals, and resources on occupational education programs. In the first section, literature on the general theory of decision making is reviewed. In the next section, an overview of decision making in educational contexts is discussed. In the third section, a framework for analysis is presented. The fourth section presents that analysis and the findings of this research effort. Finally, the fifth section gives conclusions.

Studies on Organizational Decision Making

Organizational decision making in general terms is defined by Daft (1985) as the process of identifying and solving problems. Koontz (1982) defined it as a commitment of resources, direction, or reputation. Finch and McGough (1982) defined it as the selection of an action or position from among available alternatives. Thus, decision making can be seen as a process, a commitment, a selection, or in other ways.

Writers on decision making place decision processes on a "rational" to "limited-rational" continuum. On the "rational" end of the continuum are decisions that can be quantitatively represented with alternative solutions and the probability of each alternative solving the problem. Systems that use linear programming, Bayesian statistics, PERT charts, and analytical devices are highly rational decision-making approaches. According to Daft (1985), these rational systems are for use in an environment that is stable, that have similar or identical decisions to be made over and over, and that have outcomes that can be predictable.

On the "limited-rational" end of the continuum are systems for making decisions in uncertain environments. These models are not analytically oriented. They are best when problems are novel, goals are unclear, information is scarce, fast implementation is demanded, and the outcome is not predictable.

Sharman (1984) discussed a similar continuum for describing types of decisions. He defined two categories of decisions as rational and modified rational and concluded that the rationality of different decisions in everyday life tends to be by degree. Thus, an effective way to describe the decision-making process in education is to view it in some type of rational framework. A rational framework offers a place to begin to analyze these complex phenomena.

Decision Making Models

Many models of decision making have been developed and analyzed. Three well known models will be summarized here. One model is a classical rational model, and the other two models are limited-rational models known as the Carnegie-Mellon political model and Mintzberg's incremental model.

Rational Model. The classical rational approach to decision making involves a step-by-step analytical procedure to solve a problem where all information needed is known, all parties involved have agreement, and each step is consciously made. The steps in this model may vary but usually include the following:

1. Understand the environmental context

2. Define and diagnose the problem

3. Specify decision objectives and collect information

4. Develop and evaluate alternative solutions

5. Commit to an alternative

6. Implement the chosen alternative

7. Evaluate outcome

Research in managerial and group decision making shows that managers are often unable to use this model because it is not comprehensive in its approach to human problems. Time pressures, unique problems, personalities, amount of information, different goals, and many other factors that influence a decision conflict with this model. As others have pointed out in discussing the validity of the classical rational model, there is a limit to how rational people and groups can be in complex human situations.

In the educational context, a highly rational approach to financial decisions is desired by the public. However, in many areas of education the highly rational decision-making model, although ideal, is difficult to use. In the formation of program curriculum and instruction, use of the rational model is limited because not all information is available or clearly understood by decision makers and goals are often not agreed upon by principal parties involved. When asked, an education administrator will often say decisions, even fiscal ones, are made from selected information and in an intuitive "gut level" way.

Limited-Rational Models. Much of decision making discourse in the literature is concerned with incorporating the complexity and ambiguity of decision making into models that are "limited-rational." These models differ from the highly rational approach in that they attempt to explain the process of decision making when there is limited information, conflicting objectives, and continuing uncertainty. They allow for non-analytic behavior on the part of the decision maker.

The Carnegie-Mellon Model is based on the work of Cyert and March (1963). Their model deals with the ambiguous human nature of decision making by understanding how coalitions and alliances influence the decisionmaking process. Much emphasis is placed on the political and social forces at work in and outside of an organization.

The Carnegie-Mellon research showed that decision making in organizations involves many people instead of just a top decision maker, and coalitions are a major element in decision making for two reasons. One, goals are often ambiguous and inconsistent, making problem identification very difficult. This difficulty results in disagreements about problems and goals which demands discussion and consensus before proceeding to the selection and implementation stages of decision making. Two, a single manager does not have the time, resources, or mental capacity to identify all dimensions of most problems and to process the information in a thoroughly rational way. Therefore, managers enlist others to help in addition to depending on his/her experience and intuitive abilities to arrive at decisions. Coalitions often require trade-off of desires or needs to bring about decisions. Steps in the political model usually include the following:

1. Awareness of uncertainty and/or conflict

2. Formation of a coalition

3. Search to establish procedures and create solution

4. Adoption of an alternative that is acceptable

The Carnegie-Mellon model appears to be useful in understanding institutional, federal, and state educational governance decisions. Education stakeholders often disagree on correct courses of action. Many individuals and groups, from governors to teachers and students, have interest and expertise in the decision area, and they often demand input and can influence final decisions. Involvement tends to require the understanding and use of social interaction.

The second limited-rational model is the incremental decision model based on the work of Mintzberg, Duru, Raisinghani, and Theoret (1976). This model suggests that organizational decisions are usually made by a series of small decisions that combine to produce a major decision. Three stages in this model are as follows:

1. The identification phase
2. The development phase
3. The selection phase

The incremental model is an important model because it recognizes the value and importance of small decisions and decision interrupts. Early decisions incrementally add to a movement and to a direction over a period of time. Therefore, routine decisions made in the identification and development phases, such as what information to use, who to involve, etc., have a critical impact on the larger decision that is finally selected and implemented.

Internal and external feedback at every phase affects implementation of the larger decision, and is viewed as important. In the incremental model, feedback is called decision interrupts. The interrupts, are seen as inputs that provide ways for the organization to evaluate, try alternatives, gauge reaction, and "feel" their way through the larger decision-making process. Examples of program decisions being influenced by interrupts are many. The interrupt may come about because of immediate feedback in the classroom from students, by formal program evaluation, by state requirements or needs, by economic conditions, or many other ways. In education, interrupts are often outside the control of and unexpected by the decision maker.

The incremental model can be useful in understanding educational decisionmaking because educational decisions are contingent upon so many factors like evaluations, funding, politics, and trends. Many decisions appear to be recycled through the decisionmaking process in order to make the continuous program adjustments that are required. In this recycling, past efforts of decision makers are clearly felt. In fact, most decision makers would agree that present decisions build upon past decisions.

All three of these models take into account different aspects of the curriculum/instructional decision making complexity and reflect, in part, the nature of decision making in institutions. Educational decisions can be viewed as having some degree of rationality and passing through stages of input, process, and outcome.

Overview of Educational Decision Making

Educational decision making is a crucial, but highly complex activity. Stufflebeam (1971) estimates that several hundred different personnel positions may become involved in program decisions in schools. Also, a vast amount of time and energy is usually expended to identify program needs, to obtain resources, to implement new programs, and to evaluate programs. Although complex and often frustrating, this investment in time and energy in deciding what and how to teach is justified in order to impart useful knowledge and skills through curriculum and instruction.

Many factors influence decisions in postsecondary educational institutions. First, the process of providing curriculum and instruction in institutions is dependent on individuals and groups that are involved. Involving educators and students is crucial in order to have acceptable decisions, educator commitment, and quality results. Involvement not only determines who is involved, but it largely determines what decisions are successful. According to Sharman (1984), two important factors that determine the degree an individual or group should be involved in educational decision making are (1) whether an issue is relevant to a person or group and (2) whether an issue is understood by a person or group. In the postsecondary occupational context, curriculum and instruction are relevant to many people and, at the same time, many people have expertise relevant to some aspect of classroom activity. The student, the instructor, the head of the department, the institutional administration and staff, the institution board, the state's agencies and boards, the federal agencies, and the general population all have a stake to some degree in what happens in the classroom.

Who makes the decisions and what decisions are made influences the effectiveness of decisions. Sample (1985) wrote that effective program decisions are the product of the extent to which decisions have quality (concerning the objective facts) and acceptance (concerning the feeling of persons who must execute the decisions). Quality information is more likely to enter the decisionmaking process when several sources of information are available from different perspectives. Commitment and institutional congruence are more likely when broad stakeholder acceptance of decisions is actively sought. Therefore, educational organizations are obliged to have a wide variety of people involved in strategic decisionmaking.

Second, decisions are made to set policies and goals, and in turn, these policies and goals influence curriculum/instructional decisions in powerful ways. Goal and policy decisions help focus activity and resources toward selected educational ends. These goals must be implemented by local administrators and teachers and must center on student and community needs to be successful. Goal setting also tends to provide a measuring stick to evaluate the effectiveness of classrooms, programs, and institutions.

Decisions on program policies and goals serve as a communication to the public that mandates are being carried out. Decision makers must be prepared to show the reasoning behind their decisions. At the federal level, legislative mandates have established the importance of highly rational decisionmaking as a way to communicate fiscal responsibility to the voters. Since comprehensive state planning became mandated for vocational programs with the 1963 Vocational Education Act, state and local administrators are required to use labor market and educational data in an objective, rational fashion in developing program offerings in order to account for budget outlays.

Third, curriculum and instructional decision making is influenced by the levels of resources that can be obtained, used, or replaced. Operating occupational programs is often very costly. With material and equipment expenses rising and with limited sources for funding, decisions involving resources are crucial to today's schools and communities. It should be obvious that funding and types of materials and equipment used in occupational classrooms have an impact on the curriculum taught and the method of instruction used. A better understanding of the degree that resources influence decisions is needed to address questions of relevancy and efficiency.

Decisions have been shown to be important, even crucial, in forming curriculum and providing instruction. The theme of this chapter is what degree do selected factors influence the different decision-making processes in a postsecondary occupational institution. Specifically, what people or groups have an influence? Do different institutional goals have an effect? Do outdated facilities or equipment, resources spent on non-instructional purposes, and inadequate instructional funding influence decision making?

Program Decision Making Studies and Models

Most research in educational program decision making has been approached by use of influential levels, variables, or descriptive categories. Myers (1970) sought to provide a framework for answering the question of who makes what decisions in curriculum and instruction. He suggested three macro levels of curriculum/instruction decisions: societal, institutional, and instructional. A hierarchy of influential levels exist so that societal aims, values, and procedures are determined by the board of education (societal), refined by institutional departments or committees (institutional), and implemented in the classroom by the teachers with certain restraints and latitude (instructional).

Administrators operate between the three levels to ensure that decisions reached at "higher" levels are implemented. Also, the administrator provides upward communication from "lower" levels to "higher" levels in the organizational structure.

Bowers (1976) used a Delphi process to rank major decision areas and important informational factors in California community college occupational programs. The major decision areas by rank of importance were found to be (1) evaluation, (2) program planning, (3) occupational counseling, guidance, and placement, (4) program objectives, (5) program goals, (6) coordination and direction, (7) advisory committees, and (8) operational budget. Local administrators noted 194 information factors that were perceived to be needed for effective planning of occupational education in these eight decision categories. The information factors were then ranked in categories of perceived importance in program decision making as follows: (1) attitude and commitment, (2) product of occupational education, (3) community needs, (4) occupational counseling, guidance, placement, and follow-up, and (5) facilities, equipment, and staffing requirements.

Franchak (1983) identified factors that secondary and postsecondary administrators in vocational education used as a basis for decisions to add, terminate, or modify programs in their schools. Approximately thirty factors were identified. The top six factors affecting local administrators' decisions were the following:

1. Formally and informally conducted industrial surveys
2. Advisory committees
3. Student enrollment figures and student interest
4. Published labor market data
5. Rates of job placement
6. Input from faculty and other administrators

Study highlights showed postsecondary occupational administrators cited industry surveys as the most important information in adding programs. In terminating programs, student enrollment was most often cited. Input from advisory committees and recommendations from faculty and administration were cited as most important in modifying programs.

Sample (1984) approached curriculum development from the perspective that effective program planning for adults requires a dialogue between involved parties. The study identified categories of group leadership decisionmaking methods. Five methods that identified how decisions were made were as follows:

Autocratic I	Leader makes the decision him/herself using information available at the time
Autocratic II	Leader obtains the necessary information from subordinates without their evaluation of alternative solutions, then decides him/herself on a course of action
Consultative I	Leader shares the problem with relevant subordinates individually, seeking ideas and suggestions, then decides on his/her favorite alternative
Consultative II	Leader shares the problem with subordinates as a group and get ideas an suggestions, then decide on his/her favorite alternative
Group II	Leader shares the problem with subordinates as a group and together evaluate alternatives, then as a group a decision is made with the support of the entire group

A selection of case examples were used to analyze the model. Sample concluded that leaders will use any of the decision methods depending on individual style, time requirements, and situation.

Copa (1980) designed a vocational educational systems model dealing with types of decision information by categories. Information needs were tailored to four categories from which decisions must be made. He used a rational decision-making model of context, input, process, and outcome and equated them respectively with planning (intended ends), structuring (intended means), implementing (actual means), and recycling (actual ends). All of the categories are interrelated. Copa placed emphasis on planning and goal formation as a result of the decision making context. Input is largely concerned with who provides input and what resources are available for structuring a decision. Process is concerned with the mechanics of implementation. Outcome (product) is brought about by a recycling process in which accomplishments are contrasted to plans, goals, and objectives. This model serves as a useful attempt to put information into a pattern so that decisions can be analyzed as intended and as actually occurred.

Framework for this Study

Although the program development process in postsecondary occupational programs appears to be influenced by many factors, three categories of influences are most clearly recognizable. They are as follows:

- Individuals and groups. This category establishes the importance of various people or groups in establishing or revising the curriculum and determining instructional input. It addresses both internal and external influence on the decision-making process.

- Specific Goals. Goals set the institution's overall philosophy about such things as providing specific skill training, upgrading basic skills, and requiring academic courses.
- Resources. This category accounts for the influence exerted by the presence of sufficient curriculum and instructional-related funds, materials, and equipment.

These categories serve as three classifications of influencing factors for building a model of decision making in occupational programs.

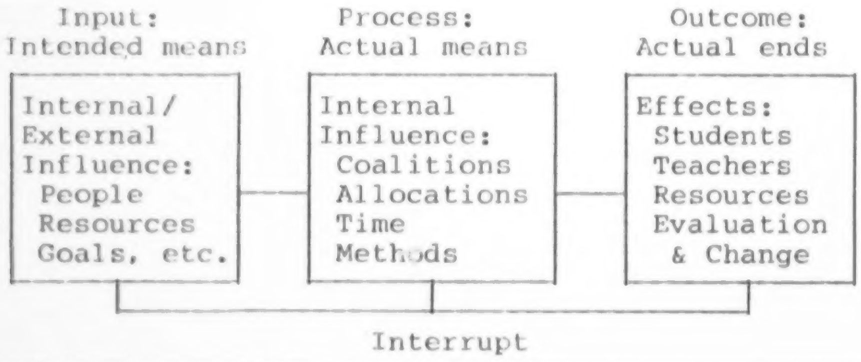
A Decision Making Model

A modification of the rational model used by Copa (1980) is used as the underlying decisionmaking model for this study. This model is represented in exhibit 8-1. Curriculum and instructional decision making is influenced by people, goals, and resources because of these factors' pivotal existence in and input into the process.

The input (intended means) represent all the internal and external factors including people, goals, and resources that are present in the environment that may identify curriculum or instruction needs. The process (or actual means) is concerned with the mechanisms for adding, modifying, or terminating curriculum or instructional methods in the classroom. Process is

EXHIBIT 8-1

A CURRICULUM/INSTRUCTION DECISION MAKING MODEL


Input:
Intended means
Process:
Actual means
Outcome:
Actual ends
Internal/
External
Influence:
People
Resources
Goals, etc.
Internal
Influence:
Coalitions
Allocations
Time
Methods
Effects:
Students
Teachers
Resources
Evaluation
& Change
Interrupt

concerned with time requirements, methods, and coalitions formed. The outcome (or actual ends) represents the actual changes in students, teachers, and resources as a result of input and process. A feedback loop allows for any interrupt that could bring about the need to analyze, change, or eliminate curricula and instructional activities in programs. It is apparent that decisions made at any time during the process and internal and extenal interrupts have an incremental effect on future decisions. Therefore, the three categories and interrupts are crucial in every decision impacting on the classroom.

Definitions and Research Questions

For this study curriculum/instruction is defined as the planning and teaching of learning activities and experiences that a student receives under the direction of the institution. Decision is defined as the act of arriving at a determination and accepting the commitment to an alternative. Decisionmaking process is the activity of defining and solving problems.

The following questions are formulated to describe the perceptions of administrators and/or chairpersons in the model designed for the study.

1. Who is influential in making curriculum/instructional decisions in schools? (individual and groups)
2. What are the perceived curriculum/instructional goals? (goals)
3. To what degree does adequacy of funds, materials, and equipment influence curriculum/instructional decisions? (resources)

Findings

Major findings in this study are organized by the influence that individuals and groups, goals, and resources have on postsecondary curriculum and instruction decisions. Perceptions of administrative officers and chairpersons of occupational programs were collected and analyzed.

Individuals and Groups

Influence ratings were calculated from approximately 370 administrators and 590 chairpersons for eight categories of individuals or groups that influence curriculum/instruction decisions. A scale of 1-4 was used that allowed respondents to indicate the amount of perceived influence. The scale of influence used was (1) A great deal, (2) Some, (3) Only a minor extent, and (4) None. The mode, or highest percent of respondents, was designated as the overall rating for the individual or group.

Influence on Curriculum. Exhibit 8-2 shows the influence of individuals and groups on the establishment or revision of curricula in occupational programs. Looking at the percentage responses for the degree of influence, administrators perceive themselves (53%) and instructors (91%) as having "a great deal" of influence on curriculum decisions. All other individuals and groups were perceived as having "some" influence: instructors in other departments (52%), students (41%), advisory or governing board (40%), business and industry (45%), state agencies (43%), and former students (44%).

Chairpersons of occupational programs perceive the departmental staff (89%) as the only category of individuals or groups to have "a great deal" of influence on curriculum decisions. Four individuals or groups were perceived as having "some" influence: chief administrative officer (42%), advisory or governing board (39%), business and industry (42), and former students (46%). Two groups were perceived as having "only a minor extent" of influence: Instructors in other departments (56%) and State agencies (31%).

Administrators and chairpersons agree that instructors in the departments have the greatest degree of influence of all parties on establishing or revising curricula. They rated influence of chief administrative officers, instructors in other departments, students, and state agencies differently, however. In each case, administrators perceived these individuals or groups as having more influence than the chairpersons felt they had.

Influence on Instructional Approaches. Perceptions from administrative officers and chairpersons on the degree of influence of individuals and groups on instructional approaches is shown in exhibit 8-3. Looking at the administrators response, it can be observed that they perceive department chairs (60%) and instructors in departments (93%) as having "a great deal" of influence in instructional approaches used in postsecondary occupational education. Chief administrative officer (46%), students (55%), and business and industry (42%) are viewed as having "some" influence. Advisory or governing boards (36%) and state agencies (35%) are viewed as having "only a minor extent" of influence.

Chairperson rankings of individuals and groups that have influence on instructional approaches are similar to administrators. The only exceptions in comparison of perceptions are chairpersons view business and industry and state agencies as having less influence on instructional approaches than administrators. The four strongest categories of people and organizations who influence instructional approaches are: (1) instructors in the departments, (2) department chair, (3) students, and (4) chief administrative officer.

EXHIBIT 8-2

INFLUENCE OF INDIVIDUALS/GROUPS ON ESTABLISHING OR REVISING CURRICULA

	Administrator		Chairperson	
Individual or Group/Influence	Freq.	%	Freq.	%
Chief administrative officer				
A great deal	197	53%	141	24%
Some	135	36	244	42
Only to minor extent	35	10	180	31
None	3	1	20	3
Total	370	100	585	100
Instructors in department				
A great deal	339	91%	528	89%
Some	31	8	52	9
Only to minor extent	2	1	13	2
None	0	0	1	0
Total	372	100	594	100
Instructors in other departments				
A great deal	27	7%	20	3%
Some	194	52	104	18
Only to minor extent	128	35	332	56
None	22	6	137	23
Total	371	100	593	100
Students				
A great deal	12	3%	29	5%
Some	148	40	208	35
Only to minor extent	177	48	269	46
None	34	9	83	14
Total	371	100	589	100
Advisory or governing board				
A great deal	123	33%	140	24%
Some	148	40	234	39
Only to minor extent	82	22	127	21
None	17	5	92	16
Total	370	100	593	100

EXHIBIT 8-2--Continued

Individual or Group/Influence	Administrator		Chairperson	
	Freq.	%	Freq.	%
Business and industry				
A great deal	143	39%	217	37%
Some	167	45	248	42
Only to minor extent	42	11	83	14
None	17	5	40	7
Total	369	100	588	100
State agencies				
A great deal	75	20%	99	17%
Some	159	43	173	29
Only to minor extent	98	26	181	31
None	39	11	135	23
Total	371	100	588	100
Former students				
A great deal	24	6%	38	6%
Some	163	44	272	46
Only to minor extent	151	41	226	38
None	33	9	57	10
Total	371	100	593	100

Goals

The mission or goals of the institution affect decision making. Because institutional missions and goals vary between types of institutions, the analyses reported below were done separately by type. Administrators rated the degree of importance they attach to eight selected goals: (1) prepare students to be good citizens, (2) develop basic skills, (3) develop students' abilities to solve problems and think critically, (4) prepare students to be competent consumers, (5) prepare students for further schooling, (6) provide training for specific occupations, (7) give students broad, general career preparation, and (8) place students in jobs as they leave school. Ratings of each goal was marked by administrators as [1] Very important, [2] Important, [3] Not too important, [4] Not at all important.

Exhibit 8-4 shows the percentage of administrators that rated goals as "very important" by type of institution. The reader may refer to the appendix A for the frequencies and percentages on all goals. Two goals, "develop basic skills" and "develop students' abilities to solve problems and think critically," received high percentages of "very important" ratings from all three types

EXHIBIT 8-3

INFLUENCE OF INDIVIDUALS/GROUPS ON INSTRUCTIONAL APPROACHES

Individual or Group Influence	Administrator		Chairperson	
	Freq.	%	Freq.	%
Chief administrative officer				
A great deal	123	33%	85	14%
Some	171	46	243	41
Only to minor extent	66	18	210	36
None	9	3	52	9
Total	369	100	590	100
Department chair				
A great deal	222	60%	305	51%
Some	110	30	234	39
Only to minor extent	8	2	46	8
None	28	8	9	2
Total	368	100	594	100
Instructors in department				
A great deal	344	93%	531	89%
Some	22	6	57	9
Only to minor extent	4	1	3	1
None	0	0	3	1
Total	370	100	594	100
Students				
A great deal	29	8%	51	9%
Some	202	55	320	54
Only to minor extent	126	34	186	31
None	12	3	33	6
Total	369	100	590	100
Advisory or governing board				
A great deal	40	11%	38	7%
Some	127	34	167	28
Only to minor extent	134	36	208	35
None	69	19	174	30
Total	370	100	587	100

EXHIBIT 8-3--Continued

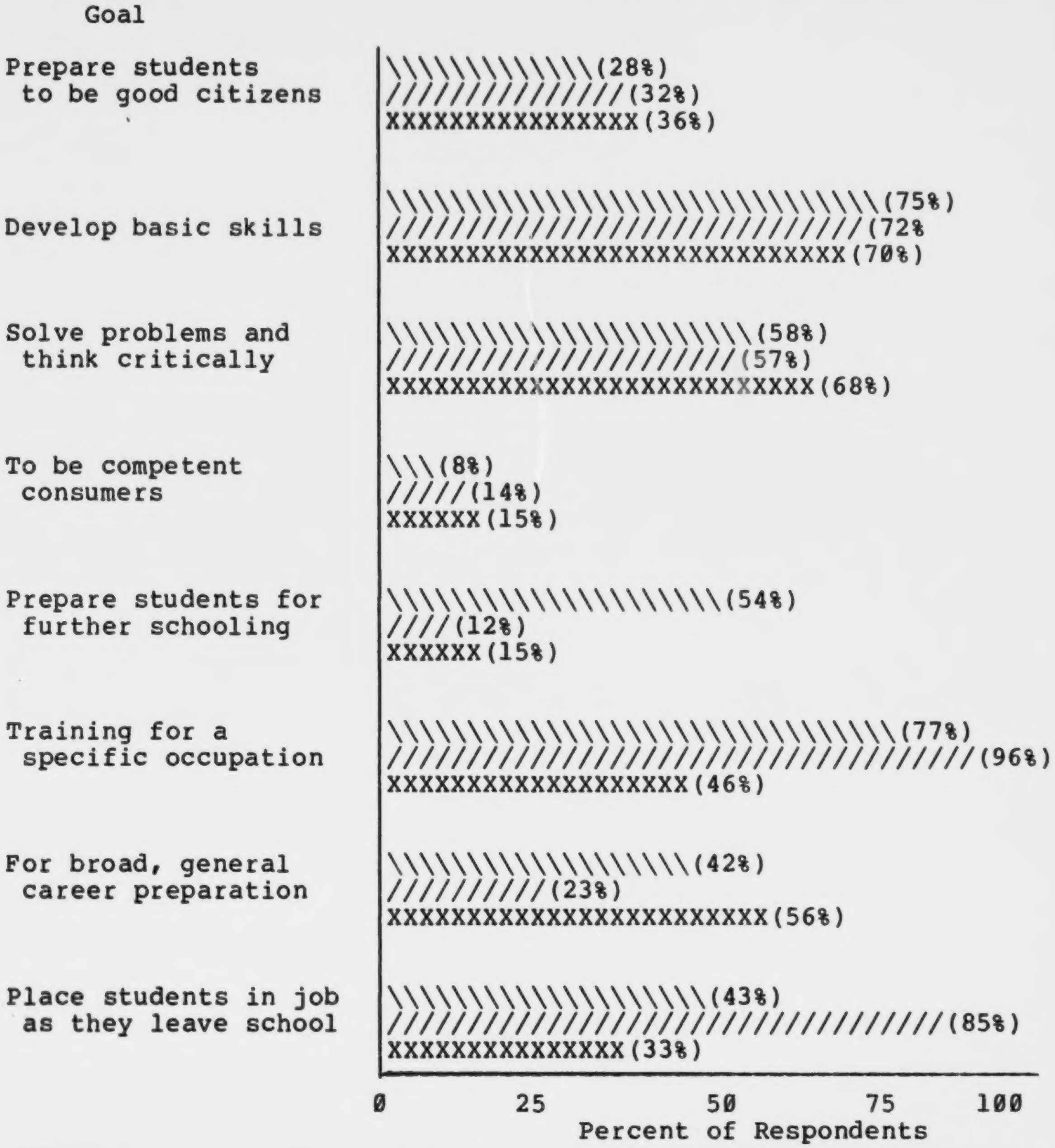
Individual or Group/Influence	Administrator Freq.	Administrator %	Chairperson Freq.	Chairperson %
Business and Industry				
A great deal	57	15%	68	12%
Some	153	42	194	32
Only to minor extent	111	30	195	33
None	48	13	133	23
Total	369	100	590	100
State agency				
A great deal	22	6%	32	6%
Some	100	27	110	19
Only to minor extent	129	35	203	34
None	119	32	246	41
Total	370	100	591	100

of institutions. The goals of "providing training for a specific occupation" and "place student in a job" were rated very high at one or two institutional types. The goal of preparing students to be competent consumers had less "very important" ratings by administrators in each type of institution.

Statistically significant differences were found in the way administrators from the different type institutions responded to four of these goals. The chi square test results for these four are reported in exhibit 8-5. For the goal of preparing students for further schooling, type 1 (community colleges) administrators perceived this goal to be "very important" with a total of 54% of the responses, with type 2 technical institutes and type 3 (four-year) institutions indicating much lower percentages.
For the goal of providing training for specific occupations, administrators in type 1 (77%) and type 2 (96%) perceive this goal to be "very important", while type 3 institutional administrators did not rank the goal as high (46%). A difference was observed between institutions for the goal to give a broad, general career preparation. Administrators perceived this goal as being "very important" in type 1 (42%) and type 3 (56%) institutions, while type 2 administrators responded that this goal was "very important" only 23% of the time. Finally, for the goal of placing student in a job as they leave school, administrators in type 2 institutions rated it "very important" 85% of the time, with lower ratings for type 1 (43%) and type 2 (33%) institutions.

EXHIBIT 8-4

IMPORTANCE OF SELECTED CURRICULUM/INSTRUCTIONAL GOALS IN POSTSECONDARY OCCUPATIONAL EDUCATION*



*Entries represent % rating goal as "Very important." By Institution Type (\ = Type 1) (/ = Type 2) (X = Type 3). n = 377.

EXHIBIT 8-5

RELATIONSHIP BETWEEN GOALS AND TYPE OF INSTITUTION

Goal	X^2	V
Prepare students for further schooling	99.3*	.37
Provide training for specific occupations	59.8*	.29
Prepare students for broad, general career preparation	43.2*	.24
Place students in jobs	66.1*	.30

* = probability of $\leq$ .001

Resources

The availability of resources--facilities, equipment, and funding--influences curriculum and instruction in occupational programs. Administrator perspectives in occupational programs were collected on three areas involving resources: outdated facilities or equipment, resources spent on non-institutional purposes, and inadequate institutional funding.

Exhibit 8-6 shows the level of agreement on three statements concerning resources that could exert influence on curriculum and instruction in occupational programs. Administrators and chairpersons of occupational programs were asked if they (1) Strongly disagree, (2) Disagree, (3) No opinion, (4) Agree, or (5) Strongly agree with statements regarding factors that exert influence. On the statement "Outdated facilities or equipment restrict curriculum offerings or instructional content", 60% of administrators tended to agree or strongly agree. Thirty-eight percent disagreed or strongly disagreed. Chairpersons showed similar responses to administrators.

When asked "resources spent on non-instructional purposes (e.g., security, maintenance) seem excessive and restrict our instructional mission", 84% of administrators disagreed or disagree strongly. Only 9% agreed or strongly agreed. Chairpersons tended to disagree or strongly disagree but less often than the administrators (65%). On the statement "inadequate institutional funding restricts curricula and instruction", a majority of 70% agreed or strongly agreed with the statement. Twenty-seven percent disagreed or strongly disagreed. Chairpersons' responses were similar to the administrators. A chi square test for independence was calculated across types of institution and the three resource factors. No significant differences were found.

EXHIBIT 8-6

LEVEL OF AGREEMENT ON RESOURCE FACTORS THAT EXERT INFLUENCE ON CURRICULUM AND INSTRUCTION

Factor	Administrators No.	Administrators %	Chairpersons No.	Chairpersons %
Outdated facilities or equipment				
Strongly disagree	51	14%	81	14%
Disagree	90	24	146	25
No opinion	6	2	23	4
Agree	165	45	225	38
Strongly Agree	56	15	110	19
Total	368	100	585	100
Resources spent on non-instructional purposes				
Strongly disagree	88	24%	90	15%
Disagree	220	59	293	50
No opinion	30	8	110	19
Agree	24	7	68	12
Strongly Agree	9	2	22	4
Total	371	100	583	100
Inadequate institutional funding				
Strongly disagree	12	4%	36	6%
Disagree	85	23	150	26
No Opinion	11	3	29	5
Agree	160	44	261	45
Strongly Agree	96	26	107	18
Total	364	100	583	100

Conclusions

Perceptions of administrators and chairpersons in postsecondary occupational programs reveal several interesting conclusions.

- Administrators tended to perceive a stronger involvement of all parties in establishing and revising curricula and in determining instructional approaches than chairpersons. The latter perceived the department itself as having the most influence.
- Instructors have the most influence on curricula an instructional matters of all individuals and groups.

- Administrators perceive that they have more influence on institutions curricula than chairpersons perceive them to have.

- Administrators perceive that state agencies have a greater influence on establishing and revising curricula and on establishing instructional approaches than chairpersons perceive them to have.

- Administrators perceive that business and industry have greater influence on instructional approaches than chairpersons perceive them to have.

- The four most involved individuals or groups in establishing instructional approaches are (1) instructors in the department, (2) department chair, (3) students, (4) chief administrative officer according to administrative and chairpersons perspectives.

- Community college, technical institute, and four year college administrators agree on the importance or lack of importance of the following goals: (1) to develop basic skills, (2) to solve problems and think critically, (3) to prepare students to be good citizens, and (4) to be competent consumers.

- A statistically significant difference exists in the population between type of institution and the degree that the following goals are perceived as important: (1) preparing students for further schooling, (2) providing training for specific occupations, (3) preparing students for a broad, general career preparation, and (4) placing students in jobs as they leave the institution.

- Community college administrators believe the goal of preparing students for further schooling is far more important than technical institutes and four-year institution administrators believe it to be.

- Community college and technical institute administrators believe the goal of training for a specific occupation is more important than four-year college administrators believe.

- The goal of preparing students for a broad, general career is a more important goal for four-year colleges than for community colleges and vocational technical schools.

- Vocational-technical school administrators believe the goal of placing students in jobs as they leave school is more important than community college and four-year institution administrators believe.

- There is no significant statistical difference between type of institution and how they perceive the influence of resource factors studied in this research.

- Administrators and chairpersons believe outdated facilities or equipment at their institution influence curriculum and instructional decisions.

- Administrators and chairpersons believe that resources spent on non-instructional purposes do not seem excessive and do not restrict curriculum and instruction. However, chairpersons are less emphatic than administrators.

- Administrators and chairpersons strongly believe that inadequate funding influences curricula and instruction in occupational programs.

CHAPTER 9

PROFESSIONAL DEVELOPMENT OF FACULTY THROUGH INSERVICE EDUCATION

Betty L. Rider

> So long as people make the crucial difference in the school operation, their inservice education will be a vital concern. Even if a fully qualified, ideally competent staff were available, time would gradually erode that competence as conditions change and old competencies become obsolete. (Harris, 1980, p. 14).

Introduction and Study Hypotheses

Although postsecondary education can be traced back to the early part of this century, until the mid-1960's the concept of the 2 year institution was not widely accepted. Between 1965-75, enrollments dramatically increased as postsecondary institutions began to provide a viable alternative to 4 year universities and colleges. The number of institutions almost doubled from 771 to 1230 and enrollments more than trebled from 1,292,573 to 4,069,279 (AACJC, 1986).

Cohen and Brawer (1984) cite the end of rapid expansion of community colleges during the 1970's as causing the need for faculty/staff development.

> Administrators had found it much easier to employ new instructors to perform different functions than to retrain old instructors, a procedure that worked well as long as expansion was rapid. But when the rate of exchange exceeded the rate of expansion, when new priorities were enunciated more rapidly than new funds could be found, the residue of out-of-place staff members increased--hence the calls for staff development. (p. 79).

This decrease in expansion activities, they contend, created the need for faculty/staff development.

In 1972, O'Banion identified the components of a successful faculty/staff development program as: having a coordinator for the program; having the program continue throughout the school year; relating to the long range improvements of the college;

meeting institutional goals; and individualizing development activities as much as possible. O'Banion contended that the overriding purpose of staff development is to provide the students with enhanced learning situations. Every postsecondary institution should develop staff inservice programs that are an integral part of normal college activity.

Staff Development

Staff development is an issue that has gained attention from educators and administrators. The concept of continued learning is one that has become a reality for most people in the postsecondary arena.

While monies to support equipment and supply purchases, facility maintenance, and advisory and community support groups are important, the most critical resource at any postsecondary institution is the full- and part-time faculty. Garrison (1984) contends that the faculty should be developed to its fullest potential,

> Maximizing this most precious of all resources of the college is essential if, indeed, the dollars (majority) which are invested in making this college resource available are to be maximized. Industry and business recognize this premier point as evidenced by the $50-billion-plus they invest in education and training activities annually for their employees. Colleges which fail to respond in a similar fashion fail to protect their investment in this invaluable college resource. Colleges which fail to invest in their faculty, staff, and program development also fail because they lower their ability to provide the quality, relevant and, therefore, cutting-edge education and training required by today's high-tech society. This high-tech society resides at the grass-roots community served by your college. This factor has never been more critical than today because of the enrollment patterns and trends of growing occupational programs. (p. 84)

Hansen (1983) provided parameters for several terms relating to staff development. Faculty/staff development was defined as having six groups to be served: staff, administrative, organizational, instructional, personal or faculty. Activities for each group were separated into five functional categories: orientation, on-campus inservice, professional activities, individual activities, and group activities. Evaluation methods were separated into five categories: immediate verbal feedback, open-ended written statements, questionnaires, student outcomes, and formal written reports. Under the area of "Improvement of Instruction," Hansen listed several areas for development that might improve instruction; they included learning pedagogical skills, redesigning teaching materials, and maintaining currency in discipline developments.

Smith (1980) studied staff development in community colleges and found two goals mentioned more frequently than others:

> a) To increase staff (faculty, administrator, support personnel, clerical, etc.) responsiveness to student needs; and b) To increase the faculty's knowledge about the teaching-learning process. (p. 211)

Other goals cited related to improving teaching skills and thus related to the teaching staff and not other staff members. The strategies for staff development found to be most effective by Smith included providing travel funds to attend professional conferences and providing grant monies to develop new teaching strategies.

To examine faculty/staff development at the state level, Hansen (1983) used the previously explained model and surveyed Illinois community college teachers. He reported that 94% of responding community colleges had orientation sessions for new faculty, 78% of those responding felt that orientation was beneficial to new staff, and 62% felt there was benefit to existing faculty to improve instruction.

Richardson and Moore (1987) reported on their survey of Texas Community Colleges that sought to determine the extent of faculty development programs and the evaluation methods of those programs. They found that most faculty development programs were group oriented in nature, perceived by participants to be effective, and the programs were offered more frequently than past studies had indicated. Another study that examined faculty development at the state level by Caffey (1979) identified three goals for development programs that were found to be most preferred by the faculty members. Those goals were: improving of teaching skills, enhancing the instructor's knowledge in the subject field, and motivating faculty members to strive for excellence in their performance as teachers.

In an example of a local program, Cooper and Hill (1985) outlined the Faculty/Industry Partnership developed at Thomas Nelson Community College in Virginia. This partnership allowed faculty to study their discipline in-depth, on a short term basis (10 weeks, one quarter) in an industrial setting. Replacement faculty members were hired with State of Virginia funds and nine faculty participated. Evaluations indicated the program was a success; the skills and knowledge of faculty were updated. These background studies lead to the first hypothesis of this study to be tested: formal, structured staff development programs exist at postsecondary occupational education institutions.

Technical Obsolescence

The issue of staff development is a very important one due to the impact of changing technology on a static curriculum. Technological innovations occur at such a rapid pace that it is impossible to maintain currency on every innovation. Without time for technical updating, teachers in occupational programs risk becoming technologically obsolete due to the non-technical demands on their time: teaching, preparation, advising, and a lack of time and/or funds for professional development. Garrison (1984) supported the technical update of faculty by stating:

> High-tech program initiatives represent one of the greatest challenges faced by community/technical colleges today. A resultant challenge is that of keeping faculty and staff working at a knowledge that, indeed, is at best near the "cutting edge" or at least in a "fast follow" mode. (p. 85)

When the faculty do not stay current in their occupational field, the program at the institution also suffers. Garrison (1984) focused on the outcomes of technical obsolescence:

> If programs are not maintained at a level consistent with the technology as incorporated in the job structure in the community, they are not relevant. If not relevant, they do not and cannot serve the community. They are then obsolete and must be closed just as a business or industrial manufacturing establishment must close its doors and board its windows when it is unable to be productive and competitive. (p. 85)

The faculty/technical update issue is one of extreme importance for providers of occupational education at the postsecondary level. Without a scheduled program of inservice education, including technical update, occupational faculty run the risk of training an underskilled workforce. Long and Warmbrod (1982) assert that postsecondary administrators and planners need to "rethink their traditional strategies for initiating and updating high-technology programs (p. 1)." The factors of costly equipment, the need to update curricula, and need for qualified instructors may affect postsecondary institutional responsiveness to technological advances in occupational programs. Long and Warmbrod offered several recommendations, based on successful practices in postsecondary institutions for program planning: finance and equipment, staff development and recruitment, and curricula and delivery systems. Recommendations for staff development included: offering industrial trainers unpaid adjunct professor status, providing inservice activities for part-time instructors, having an active advisory board, altering the faculty pay scale to offer more money in high demand areas, developing summer industrial internships for faculty, offering incentives for faculty attendance at conferences/workshops, and creating a strategy for systematic update of the faculty.

Bender and Lukenbill (1984) emphasize the strategic role of community and technical colleges in developing human resources for employment, especially in the area of high technology. They state,

> the focus of this educational enterprise is the practical world of the employer who looks increasingly to the nation's two-year colleges as a unique source of relating theory and practice and constantly translating new theoretical knowledge into applied knowledge. (p. 16)

While community and technical colleges have done a tremendous job of responding to business and industry needs, Bender and Lukenbill assert that community and technical colleges ignore their own human resource needs. Faculty that teach in the postsecondary arena need the same opportunities for technical update they are providing to their students.

O'Banion (1977) also stressed the importance of community and technical colleges human resources, "The staff of a college is its single greatest resource. In economic terms, the staff is the college's most significant and largest capital investment" (p. ix). This investment should not "be allowed to wear itself out or slide into obsolescence by inattention or neglect (p. ix)." O'Banion's statements prefaced an entire issue of New Directions for Community Colleges which focused on the development of staff potential.

More recently, Hamilton and McElroy (1983) emphasized the difficult nature of this situation by stating,

> The task of keeping vocational and technical teachers abreast of the technology of their occupational fields is becoming increasingly more important, but, at the same time, more difficult. Rapidly expanding technologies and the application of new technology within existing occupations create needs for trained workers that many vocational and technical teachers are not equipped to handle. Many teachers, having acquired their technology-related skills during earlier stages of technology development, are finding those skills out of

> date. The rate of technological change and expansion makes continual updating of instructors' skills and knowledge a necessity. (p. 1)

As technology advances and causes technical skills to become obsolete, a cause and effect relationship is established; technological advances cause the obsolescence of skills. This situation creates a need for technical updating. Several methods for fulfilling technical update needs were found in the literature and summarized by Doty and Capelle (1982):

> Advisory Committees
> Conferences
> Consultants to instructors
> Conventions
> Cooperative internships
> Correspondence courses
> Courses/workshops
> Demonstrations
> Faculty residencies
> Fellowships
> Industrial/Business courses and workshops
> Industry-education exchange program
> Institutes
> Instructors consulting
> Leaves of absence
> Mini-sabbaticals
> Personnel exchange programs
> Professional days
> Reading technical journals
> Return to industry
> Sabbaticals
> Salespersons
> Seminars
> Short-term leaves
> Summer institutes
> Technical society courses/workshops
> Visits to business and industry (p. 366)

Radar (1984) conducted a review of the technical update literature in preparation for a study completed in Florida. This review briefly examined 28 different technical update program at the 2- and 4-year institution level. The methods used for technical update support Doty and Capelle's list. Speight (1976) developed guidelines to facilitate the technical update of postsecondary teachers. A nationally representative stratified random sample of teachers and administrators was surveyed. The following areas were identified based on teacher and administrative responses: methods to identify occupational changes and opportunities and time to acquire new knowledge (Speight, 1976).

Wonacott and Hamilton (1983) identified promising approaches to the technical updating of occupational teachers and the barriers and facilitators to those approaches. Six techniques for delivering the technical update in 3 program settings were identified. The delivery techniques were: internships, college courses, workshops/conferences, industrial observation, education-industry staff exchanges, and part-time employment. The three settings were: local, non-local, and industrial training. The two barriers to technical update cited most often were availability of funding and motivation. Another barrier, suggested by Beechan (1979), may be the faculty attitudes and suspicions about professional development by equating professional development and evaluation. None of the technical training programs reviewed were designed as evaluation tools. Participants in training programs were allowed to evaluate the training received. Participation or nonparticipation in professional development activities were not found to be criteria by which faculty were evaluated.

In an accompanying document (Wonacott and Hamilton, 1984), nine essential characteristics were identified as a basic strategy for developing technical update programs. The nine were:

- The strategy should provide an organization or structure for action--i.e., a logical sequence of steps to follow in designing and carrying out technological update programs or activities.
- The strategy should define the roles and responsibilities of all the individuals involved--teachers, administrators, department of education personnel, teacher educators, and business, industry, and labor participants.
- The strategy should present policy statements to support the roles and responsibilities of those involved and the activities in which they participate.
- The strategy should define and provide the resources necessary and available to teachers for participating in activities to gain technological update.
- The strategy should provide incentives and rewards to achieve and maintain motivation to participate in technological update activities and incorporate the results into program curricula.
- The strategy should identify and provide a variety of techniques by which teachers can gain technological updating.
- The strategy should allow for and provide alternative and creative configurations of techniques to best meet the individual needs of teachers seeking updating.
- The strategy should provide for the incorporation of the knowledge and skills gained in update activities into the instructional program or course materials.
- The strategy should provide for continuing and self-renewing activities to maintain technological update on the part of all involved. (p. 6)

Several models for professional development, including technological updating, exist and are available for adaptation to individual institution's needs. Institutions that have no formal, structured professional development activities for occupational faculty will underprepare students for employment, and therefore fail in their mission. The second hypothesis of the study, then, is that staff development will be particularly emphasized at institutions that emphasize student placement in their mission.

Development of Part-time Staff in Postsecondary Institutions

An area of concern in the arena of faculty development is the status of the part-time or adjunct faculty member. The part-time faculty member from Ohio was profiled by Andreyka (1971) as being:

> 39.9 years of age, male, married, holds instructor's rank in an institution awarding the associate degree, is presently employed full time in a related technical occupation, has a teaching load of 5.6 hours per week, holds a bachelor's or also a Master's degree in technical education, but has not taught at the high school or university level, has had 13 years of full-time occupational experience, received his technical preparation on-the-job or in a college or university and received some type of teaching preparation but did not do student teaching. (pp. 8-9)

As the average part-time instructor has other concerns, including another full-time job, his or her concern for the part-time teaching load may be a low priority. This study profiles the differences that may exist in the part-time instructor of 1971 and the part-time instructor of 1987.

An analysis of AACJC data reported in the 1986 directory shows 220,759 faculty employed in public postsecondary institutions; 131,131 or 59.4 percent of those were part-time faculty. Exhibit 9-1 lists the top 10 states on the basis of part-time faculty reported. The percentage of part-time faculty ranges from 48 percent in New York to 71 percent in Illinois; the average for the top 10 states is 61 percent. These 10 states represent 59 percent of total 2-year institutional faculty reported, and 64 percent of the part-time faculty.

EXHIBIT 9-1

NUMBER OF PART-TIME FACULTY DATA
IN SELECTED STATES

Rank	States	Number of Full-time	Number of Part-time	Percent Part-time
1.	California	13,304	20,399	61%
2.	Illinois	4,627	11,522	71%
3.	Texas	7,487	11,148	59%
4.	Florida	3,476	6,962	67%
5.	Michigan	3,624	5,619	61%
6.	New York	5,989	5,443	48%
7.	North Carolina	3,310	5,419	62%
8.	Ohio	3,069	4,640	60%
9.	Wisconsin	3,572	4,417	55%
10.	Pennsylvania	2,070	3,817	65%
	TOTALS	50,528	79,326	Ave. 61%

Inservice education for part-time faculty may require different approaches to subject matter than inservice required by full-time faculty. Black (1981) conducted a study among part-time faculty, department chairpersons and deans to determine inservice needs of the part-time faculty. Black concluded that "part-time community college faculty were in need of assistance and information in various areas related to instruction" (p. 283). A conclusion to Black's study was that a resource manual should be developed for part-time instructors that would include information covering "community college philosophy, community college students, teaching methodology and evaluation" (Black, 1981, p. 283).

Pedras (1985) described a development model for part-time faculty developed at Clark County Community College in Las Vegas, Nevada. It was based on seven components:

1. Administration of the training
2. Determination of training needs
3. Development and organization of curriculum components
4. Identification of populations served
5. Logistics of the training program
6. Funding
7. Support services (p. 4).

The part-time faculty was the population served by this program and Pedras indicated that the part-time faculty need to be fully integrated into the activities of their respective division and colleges as well as campus-wide activities.

A sourcebook was developed by the Two Year College Student Development Center at the State University of New York (1980) for administrators charged with the responsibility of part-time faculty development. Handbooks, newsletters, orientation sessions, and support services were actions or activities offered to meet the needs of part-time occupational faculty. A sample handbook is included in the source book and the following items are presented:

> welcome letter, college calendar, a brief description of the hypothetical college, an outline of policies and procedures, guidelines for admissions and grading, a course outline, suggestions for conducting the first class, and an instructor-preparation checklist. (p. 43)

Tools such as this offer administrators directions for providing inservice to part-time faculty.

A survey of Colorado part-time, adult postsecondary vocational teachers, by Valentine et al., (1979) found that part-time instructors were willing to participate in inservice activities. Seminars, media, and classroom instruction were found to be preferred modes of instruction and ten areas for instruction were recommended: student motivation, class management, safety/liability issues, testing and test construction, individualization of instruction, improving teaching skills, effective utilization of media, adult teaching psychology, lesson planning, and teaching students with special needs (Valentine, et al., 1979).

Parsons (1985) proposed a synergistic design for the effective use of part-time occupational faculty. Four dimensions to the design were availability, responsibility, marketability, and ethical considerations. Availability indicated the pool of part-time faculty ready and willing to teach. Responsibility addressed the strengths and limitations of the part-time faculty and the institution and the need for each party to fulfill their obligations. The marketability referred to the ever changing clientele and the use of part-time faculty to meet the needs of a non-traditional student population. Ethical considerations act as the foundation for the other model dimensions. The ethics of the situation ideally would be for the university to treat part-time faculty with the due consideration and respect received by full-time faculty members. In turn, the part-time faculty member would devote themselves to the fullest extent to provide quality instruction for the student. Parsons' monograph detailed five elements necessary to implement this theoretical model; they were integrating into the system, legal issues, teaching support systems, evaluation and development, and marketing perspectives (1985, p. 4).

A part of Parsons' development plan for part-time faculty was an evaluation component. Most faculty development plans shift away from evaluation as a part of the development program due to the negative connotations perceived by faculty. Parsons proposed an integrated development and evaluation system that was based on a multi-dimensional evaluation instrument and an institutional commitment to evaluation and development. Through evaluation, weaknesses could be identified and a plan created to correct those deficiencies. Parsons' emphasized the need for pedagogical skill development for part-time faculty as well as adequate support services to maintain teaching expertise.

An issue not reviewed in the literature is one comparing technical obsolescence in full-time versus part-time faculty. Considering that most part-time faculty work at another job full-time, usually in their area of technical expertise, it is logical that they are more technically up-to-date than their full-time counterparts. Another issue is that full-time faculty are better prepared pedagogically than part-time faculty and have better teaching skills than the part-time faculty. The literature indicates that inservice faculty development exists for part-time faculty and includes pedagogical skill training. The final hypothesis of this study is: Although literature exists defining models for part-time faculty member development, those faculty do not participate in faculty development activities.

Analysis

Case Study Data

In reviewing case study interviews of administrators, chairpersons, and faculty members, responses to several questions provided insights into the faculty/staff development issue. Forty-eight administrators, 72 chairpersons, and 145 faculty from 48 institutions were interviewed. Most administrators indicated that one percent of the institutions' budget was devoted to staff development. One administrator indicated that two percent of the budget was allocated to faculty development and another indicated that no monies were spent.

When questioned about how institutions supported the professional development of faculty, most administrators responded with local, state, and national conferences; inservice activities; reading journals; and professional association seminars. The type 3 institution administrators responded in a significantly different manner as they identified the activities above plus recognized research, faculty consulting, educational visitations, release time, and internships. Type 1 institution administrators reflected a difference by having more state-agency sponsored workshops or seminars, certification requirements, and upgrading. One type 1 administrator indicated a state requirement for regularly scheduled upgrading of at least 42 hours per year for faculty. One type 2 administrator detailed the activities of the Office of Professional Development at an institution in the East. State funds were provided for travel to conferences, group activities were supported by foundation funds, college courses were subsidized at $50 per credit hour, and cross-training of faculty was provided. Only a few administrators indicated that such offices existed on their campuses, however.

Chairpersons were also questioned about how the institution and their department in particular supported the professional development of faculty. No discrepancies were found among responses provided by administrators and chairpersons. Most chairpersons provided more detail about professional development activities than administrators.

Faculty were asked what activities they undertook to stay current in their field and whether or not their department or program encouraged and facilitated these activities. Professional development activities identified by the faculty are as follows: reading related journals; traveling internationally; attending meetings, seminars, workshops, trade shows; enrolling in graduate school; conducting research; or interacting with business and industry. Several part-time faculty members indicated that they worked full-time in an occupation related to their teaching assignment either in a self-employed situation or working for another firm. One faculty member indicated that he did writing and consulting as professional development activities, as those activities should be "giving out information, not receiving information." At one type 2 institution that does not have a formal professional development program, a faculty member commented on administrative attitudes that "nobody in the administration really pushes. They're usually tied up in short-term crises." This bolsters the cause for an office or position on campus designated to coordinate professional development activities. The only faculty members that consistently indicated no encouragement or support from their department were part-time faculty. The data gathered through interviews corroborates the quantitative data gathered.

Quantitative Data

In a time when technological changes occur at a rapid pace, the faculty of occupational programs are not pursuing the cutting edge in their respective fields. Almost one third (32%) reported that they spent zero hours per week obtaining additional professional training. Another 54% indicated they averaged only one to four hours per week in professional training, which leaves only 15% spending five or more hours per week in additional professional training. This lack of involvement by occupational faculty in professional training suggests that questions may be raised as to the currency of the qualifications of occupational faculty to teach their subject area. Separating the faculty into full-time and part-time status, this study found no significant difference in hours spent on additional professional training. Twenty-eight percent of the part-time faculty indicated that they spent zero hours per week on professional training, while 56% indicated that they spent 1-4 hours per week. There is no way to determine from the data collected if the part-time faculty work a full time job in a business or industry directly related to their teaching assignment. This factor might affect their perception of the need for professional training.

On the positive side, 79% of instructors have their Bachelor's degree or higher levels of education. Seventy-eight percent indicated that they had received some type of non-school based training. Of those 78% reporting this, 25% did not specify what type of training they had been involved in. Of the remainder, 46% indicated the type of training completed as on-the-job training; workshops, conferences, and seminars and vendor training or corporate workshops were each used by 6% of the respondents; and apprenticeships were used by 3% of the respondents. This indicates that at some point in their career, more than three-fourths of the faculty were involved in skill-specific training. The data did not reflect how recently this training was taken.

Aside from professional training, other activities that faculty allocate their time to include official office hours (58% spend 1-8 hours per week), completing forms and administrative paperwork (70% spend 1-4 hours weekly), preparing for instructional periods, composing and grading tests (59% spend 1-8 hours per week), counseling students about personal problems (63% spend 1-4 hours weekly), counseling students about career plans (69% spend 1-4 hours per week), tutoring and working with students who need special help (62% spend 1-4 hours weekly), contacting employers on students behalf (35% spend 1-4 hours weekly, while 56% spend no time at all), undertaking research activities in their subject area (42% spend 1-4 hours while 44% spend none), extracurricular activities including coaching (29% spend 1-4 hours while 61% spend none), working outside the postsecondary institution in a self-employed situation (18% spend 1-8 hours while 67% spend none), and working outside the postsecondary institution for another employer (19% spend 5-20+ hours weekly, while 76% spend none).

Forming a composite of a work week for postsecondary occupational faculty, a typical week's activities aside from teaching would include a full day of office hours, one-half a day for paperwork, up to a full day of preparing for classes, creating, and grading tests, one-half day counseling students about personal or career plans, one-half day tutoring and working with students who need extra help or contacting employers for students. Conducting research or coaching do not take up much time for many faculty, but several faculty have employment aside from their teaching duties.

Part-time Faculty

The survey data were reviewed separately for full-time faculty and part-time faculty. One hundred and sixty part-time faculty respondents provided information that can be compared to responses from full-time faculty. This information can assist institutions in determining how to better meet the needs of their part-time faculty.

From the data provided by respondents, a profile of a 1987 part-time faculty member is as follows: The part-time faculty member is 43 years of age; male; teaches 8 3/4 hours per week; has a Bachelor's or Master's degree; has received non-school based training, probably from on-the-job training or an apprenticeship; has not had any teaching experience in elementary, secondary, or proprietary schooling; has had ten or less years teaching experience at two-year community colleges or voc-tech institutions. In comparison with the 1971 profile, the part-time faculty member has aged, but not significantly changed otherwise. This aging is consistent with the aging of the general population.

In examining professional development activities, either preservice or inservice, received by part-time faculty members, it appears as though the only area where training has been received is in basic skills in their subject area. Exhibit 9-2 reviews training responses. These data support the hypothesis that part-time faculty do not participate in professional development activities. When asked to respond on a continuum from °Strongly Disagree' to °Strongly Agree' about opportunities for inservice training and staff development, part-time faculty responded as follows: Strongly Disagree = 3%; Disagree, 14%; No Opinion, 43%;

Agree, 34%; and Strongly Agree, 6%. Full-time faculty members responded in more of a bi-modal fashion with 24% indicating disagreement and 47% in agreement with the opportunities for training and development at their institution.

The case studies and literature indicated that part-time faculty members tend to feel isolated from the mainstream of campus activities and personnel. Exhibit 9-3 supports that by showing how many hours per month were spent with other groups or individuals at their institution. Department administrators and other instructors appear to be the two groups that part-time faculty interact with on a regular basis. This indicates that services may be of limited availability to part-time instructors.

EXHIBIT 9-2

TRAINING RECEIVED BY PART-TIME FACULTY MEMBERS*

Area of Training	Yes	No
Teaching the handicapped	20	80
Working with and teaching Limited English	11	89
Proficiency students (LEP/Bilingual)	29	71
Teaching disadvantaged and at-risk students	23	77
Working with and teaching students in programs nontraditional for their sex		
Teaching basic skills in your subject area	75	25
Addressing the needs of single parents	13	87
Addressing the needs of older students	34	66

*expressed in percentages

Summary

From the data that were collected and analyzed, it is apparent that institutions need to direct their efforts toward a formalized and well-structured professional development program for faculty. More initiatives are needed to technically update the occupational faculty and move away from complacency with the status quo.

EXHIBIT 9-3

PART-TIME FACULTY INTERACTIONS WITH WORK RELATED GROUPS OF INDIVIDUALS*

Individual or Group	Hours Spent Per Month				
	None	1-5	6-10	11-20	20+
Department head or other supervisor	34	58	7	0	0
Institutional official(s) other than those listed in "a"	70	27	2	1	0
Advisory committee	71	27	2	0	0
Other instructors	39	46	12	2	1
Guidance/counseling staff or placement	70	24	4	2	0
Employers (other than on advisory committee)	62	28	9	0	1

*expressed in percentages

A segment of the professional development program needs to be targeted toward part-time faculty. Flexible hours for administrative and counselor personnel should be initiated to foster interaction with the part-time faculty. Advisory board meetings should be held at times when part-time faculty could attend. As the part-time faculty comprise a large segment of occupational faculties, their needs should not be ignored.

Inservice activities offer a flexible avenue for faculty to improve instruction and offer a curriculum reflective of current technological innovations. Faculty do have many demands on their time, but these demands must be prioritized so that offering current, quality instruction is the highest priority. This in turn will allow students to be as prepared in current occupational areas as possible.

CHAPTER 10

POSTSECONDARY OCCUPATIONAL EDUCATION STUDENTS: DEMOGRAPHIC, EDUCATIONAL, AND EMPLOYMENT CHARACTERISTICS

Richard Willke
American Medical Association

This chapter examines the characteristics of the 3,330 students who responded to the national survey of postsecondary occupational education institutions. It has two principal parts. The first part begins with an analysis of the demographic and socioeconomic characteristics of the sample, so as to establish comparability, both in its similarities and in its differences, with national norms. Following that, the educational characteristics of the students are presented and examined. This begins with data on their educational history in high school and in postsecondary schools prior to the current one. While not only interesting in their own right, these data allow more informed analysis of the students' current education pursuits. This section leads to description of the contemporaneous educational variables, which include length of enrollment, desired degrees, expectations of completion, loan recipiency, full-time/part-time status, grades, cooperative education involvement, and some attitudinal questions. These variables are examined on a univariate basis in this part of the chapter. The final section of this part investigates other aspects of the students' situations which may be relevant to their educational accomplishments, goals, and constraints. These include their current employment characteristics, military experiences, and other training experiences.

The second part relates the current educational variables to many of the demographic, socioeconomic, educational background and employment characteristics of the students. This analysis provides numerous insights into student behavior, expectations, and circumstances. This part is concluded by a summary of the key aspects and findings of this survey.

Student Characteristics

Demographic and Socioeconomic Descriptors

The basic demographic characteristics of the sample are displayed in exhibit 10-1. A slight majority of the students are females--52%. Just 11 percent of the sample is under 20, while 41 percent are between 20 and 24 years of age. Another 39 percent are between 25 and 39 years old, and just under 12 percent are 40 or over. The mean age of all students is 27.6

Ethnic minorities appear to be slightly underrepresented in this sample, with only 10 percent black, 4 percent Hispanic, and 5 percent in other categories (Asian, American or Alaskan0Indian, and other). Fully 81 percent characterized themselves as white, not of Hispanic origin. These figures contrast with the Cohen and Brawer (1982, p.42) statistic that approximately one-quarter of all community college students are from ethnic minority groups.

The underrepresentation of minorities may be explained by the distribution of the students across population size areas. About one-third of the students live in rural or farming communities, while another quarter live in cities of under 50,000 population. Only about one-fifth of the sample resides in or near cities of over 100,000 population, with many of those in the suburbs rather than the central city.

The majority of these students have never been married. Thirty-one percent are currently married with their spouses present, while 13 percent are divorced, separated, widowed, or have some other marital situation. Even fewer have children--64 percent have no children, 10 percent have at least one child with the youngest under 6, while the other 26 percent have an older child or children.

A majority of the sample claims to be independent from their parents, in that 58 percent live separately from their parents and 63 claim that they are financially independent. About 20 percent come from a very low family income level, under $8,000. Another 18 percent fall in the $8,000-$15,999 bracket, with 21 percent in the $16,000-$24,999 bracket. The nature of the family unit determines the level of living this represents. A sizable portion of the sample comes from the higher income brackets, with 31 percent in the $25,000-$49,999 range and 9 percent in the over $50,000 bracket. This distribution is roughly similar to that found by Astin, et al., (1984) after adjusting for inflation.

EXHIBIT 10-1

DEMOGRAPHIC AND SOCIOECONOMIC CHARACTERISTICS OF STUDENTS, BY SEX

Characteristic	All	Male	Female
All	100%	48%	52%
Age			
14-19 years	11	11	11
20-24 years	41	41	41
25-39 years	37	37	37
40 or more years	12	11	12
Ethnicity			
Black	10	8	12
Hispanic	4	4	4
White	80	81	79
Other	6	7	5
Population size area			
Rural or farming community	33	32	34
Under 50,000, non-suburb	25	27	24
50,000 to 100,000	14	14	15
Suburb of 50,000-100,000 city	6	6	6
100,000 to 500,000	7	6	7
Suburb of 100,000-500,000 city	6	6	6
Over 500,000	5	5	4
Suburb of over 500,000 city	3	3	3
Military base or station	1	0	1
Marital status			
Never married	56	61	51
Married, spouse present	31	30	31
Separated, divorced, widowed, other	13	9	18
Children			
None	64	71	57
Some, youngest under 6	9	8	11
Some, youngest 6 or over	27	21	32
Independence			
Live separately from parents	58	55	61
Financially independent of parents	63	61	64
Family income			
$7999 or less	20	17	23
$8000-$15,999	18	19	17
$16,000-$24,999	21	23	19
$25,000-$49,999	31	32	31
Over $50,000	9	9	10
Mentally or physically disabled	10	13	7

Finally, 10 percent of the respondents indicated that they had some sort of disability. About half of these were physical handicaps, another 3.6 percent were sense-related handicaps (visual, hearing, etc.), and the remaining 1.3 percent were learning disabilities.

Demographic characteristics of males and females in the sample are generally very similar. The age and population size area distributions are almost exactly the same across gender. Females are somewhat more likely to be black than males are, 12 percent to 8 percent, and males are more likely to be either white or in the other category. About 30-31 percent of both males and females are currently married with spouse present, but the remaining females are twice as likely to be separated, divorced or widowed than the remaining males are. In accordance with this, 43 percent of the females and 29 percent of the males have children, with females more likely to have children in both the under 6 and 6 and older categories. Thus it is expected that females will have greater family responsibilities that may interfere with their schooling.

The socioeconomic status of females is consistent with their demographic characteristics. They are more likely than males to be independent from their parents, both financially and in living arrangements. They are more likely to come from very low income families, less likely to be in the lower to middle income brackets, and about equally likely with males to be in families with income of $25,000 or over. Once again we see that females are slightly more likely to be in difficult circumstances in terms of encountering pressures that may conflict with school.

Educational Background

The prior educational experience of a student provides important information about his/her current abilities, needs, attitudes, and likelihood of success. Exhibit 10-2 provides statistics for this sample about secondary and prior postsecondary schooling.

A large majority, 92 percent, of these students attended public schools. Of those who went to private schools, seven out of eight went to schools with a religious affiliation. Thus, the representation of public school graduates is higher than the national average, both for all those who attend high school and for all those who attend some postsecondary school.

About one-third, 32 percent, of the students in this sample reported academic/college-preparatory programs in high school, and 18 percent reported vocational or occupational preparatory

EXHIBIT 10-2

EDUCATIONAL BACKGROUND CHARACTERISTICS OF STUDENTS

Characteristic	Mean or percent	Percent of sample relevant
Secondary School		
Type of School		100
Public	92%	
Private, religious affiliation	7	
Private, other	1	
Type of Program		100
General	50%	
Academic	32	
Vocational (occupational) preparation	18	
Mean high school grades (approximate)	81%	100
Mean SAT score (approximate)	901	38
Mean ACT score (approximate)	20.7	34
Postsecondary school		
Attended other colleges	37%	100
Mean years since last enrollment	7	37
Type of institution attended		37
Community college/junior college	24%	
University or 4-year college	45	
Technical college (for AS degree	7	
Vocational/technical school (for certificate)	7	
Private specialty school	6	
Other	11	
Type of degree received		37
None	70%	
Vocational certificate	10	
Associate	9	
Bachelor's	7	
Master's or higher	1	
Other certificate or license	1	
All others	2	

programs. The remaining 50 percent reported taking a general high school curriculum.

While these students appear to have low to average high school grades compared to the general population of community college students, their college entrance examination scores appear to be higher. Astin et al. (1979) reported high school grades for all enrollees in two-year colleges, finding a median in the "B" range and an approximate average grade of 83. The median for this sample is also in the "B" range but closer to the bottom of it than Astin reports, with an approximate mean grade of 81. However, those who took the SAT or ACT tests had comparatively high scores, with approximate means of 900 in the SAT test and 20.7, in the ACT test. These figures compare with a national norm of 18.7 (Lach et al., 1979) and a 1978 average of 16.6 on the ACT for all entering community college freshmen in Illinois. While this could be due to a slight trend towards higher test scores in recent years, it may also indicate a bias in the sample towards better students from better high school programs.

This sample provides a large number of students with postsecondary education prior to (or concurrent with) their present enrollment. Three out of every eight students, or 37 percent, have such experience, with a mean time since last enrollment of seven years. This last number is the result of a skewed distribution of previous enrollments, with the most common time since previous enrollment being two to four years and a median time of five years. One student was last enrolled in college in 1935.

Of those with other postsecondary experience, 45 percent had attended a 4-year college or university, followed by 24 percent in a community college or junior college, and 7 percent in technical college with the goal of an associate's degree. Thus, 76 percent of those with prior experience and 28 percent of the entire sample had already been in some sort of degree program. Of the remainder with prior postsecondary schooling, 7 percent were in a vocational-technical institution certificate program, 6 percent were in a private specialty school such as a beauty school or real estate school, and 11 percent were in some other type of institution. Only a small proportion of this sample already have degrees, however. Seventy percent of those with some postsecondary education experience received no degree at all and 10 percent received a vocational certificate. Only about 6 percent of the total sample have an academic degree, with over half of those being associate's degrees.

Current Educational Characteristics

The most central information contained in this survey regards the aspects of the students' current enrollment and programs. Exhibit 10-3 summarizes the key data obtained for this sample.

Prior to the current quarter, the average number of quarters enrolled was 3.6, with a median of 3, indicating that most students would be classified as freshman or sophomores as expected. Full-time students comprise 79 percent of the sample who knew their status (4.6 percent did not know or did not respond). This is much higher than the the 1980 national average, in which 62 percent of all opening fall enrollments were part-time (American Association of Community and Junior Colleges, 1981). The mean number of credit hours enrolled in during this grading period was 9.6, with a median of 12. The most frequent response was 15 hours. These data are affected by respondents who claimed to be enrolled in over 40 hours[1]. The response to the question of how many credit hours the student planned to enroll in during the 1986-87 school year (September to August) was more stable, with a mean and median both near 25 hours.

Considerable variation was found in the responses to the questions about course costs and fees. The mean cost per credit hour was $27.43, but the median was much lower, at $13.40. Again there was considerable skewness, with about one-third zeroes and nearly 6 percent over $100. As for the total cost of course fees over and above the charges per credit hour, about one-half were placed at zero but the mean was $76, indicating that in some cases there is a fixed cost for enrollment but no charges per credit hour, while elsewhere costs are strictly on a per credit hour basis.

Many of the students were receiving some sort of financial aid. Those receiving loans for educational expenses comprised 27 percent of the sample, while 44 percent received some other sort of financial aid such as a scholarship, grant, fellowship, assistantship, tuition waiver, or veteran's educational benefit.

The students were asked to rank the four factors most influential in their choice of the current institution. As expected for these types of institutions, 73 percent of the students indicated that location was one of the top four factors. Cost considerations were the next most common factor, being ranked in the top four 56 percent of the time. Two other factors, the reputation of the institution for providing high quality education and training, and the recommendation of a friend or acquaintance, were also chosen over 40 percent of the time. Several other

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[1] Some vocational certificate programs denominate themselves by total instructional time and do not use a credit hour basis.

EXHIBIT 10-3

CURRENT EDUCATIONAL CHARACTERISTICS OF STUDENTS

Characteristic	Mean	Median
Enrollment information		
Previous quarters enrolled	3.6	3
Full-time status	79%	--
Credit hours this grading period	9.6	12
Credit hours planned this year	25.2	25
Financial information		
Cost per credit hour	$27.43	$13.40
Other fees combined	$76.14	0
Loan recipient	27%	--
Other aid recipient	44%	--
Most influential factors in choosing school		
Location	73%	--
Cost considerations	56	--
Reputation for high quality	47	--
Recommendation of friend or acquaintance	43	--
Degree current working on		
Vocational certificate	28%	--
Associate's degree	47	--
Bachelor's degree	11	--
Other	4	--
None	10	--
Degree eventually plan to get		
Vocational certificate	19%	--
Associate's degree	23	--
Bachelor's degree	30	--
Master's degree or Ph.D.	15	--
Other	5	--
None	9	--
Course work		
Took basic English or math	49%	--
Grades (approximate)	86	87
Spend more than average time on this course	42%	--
Number of individualized programs	1	0
Co-op program with employment off-campus	13%	--
Hours worked per week for co-op students	23	20

EXHIBIT 10-3 (Continued)

Characteristic	Mean	Median
Expect to complete program		
Yes	93%	--
No, will transfer to another program, same institution	1	--
No, will transfer to another institution	3	--
No, will probably get a job	1	--
No, other reasons	2	--
Attitudinal (percent moderate or strong agreement)		
Course work here more difficult than high school	76%	--
Instructors care a lot about students	94	--
Students here have a lot of school spirit	56	--
Had no idea how hard courses would be	47	--
Library facilities here are good	79	--
Equipment here is good	85	--
Placement in jobs not as good as advertised	28	--

--Not appropriate.

factors were chosen 20 to 30 percent of the time: the catalog's description, financial aid, the reputation of the institution for high placement rates, and parental advice. Guidance counselors and high school teachers were not very influential in the institutional choice decision.

A key indicator of the makeup of the sample is the distribution of degree programs and desired degrees. Nearly half, 47 percent, of the sample were currently working towards an associate's degree, with another 28 percent heading for a vocational/technical certificate. Only 10 percent were not working for a degree at all, while 11 percent were engaged in a bachelor's degree program. Thus a majority of the sample were seeking an academic degree, with just under a third working towards a certificate or license. Many of those currently in associate degree programs intended to go on to bachelor's program, as indicated by the distribution of eventually desired degrees. Of those planning to get some kind of degree, about half eventually wanted to get a bachelor's degree or higher. According to Cohen and Brawer (1982), such ambitions are to be expected.

The survey also obtained information about specific course work at the current school. Nearly half the sample took a developmental English or math course, indicating some deficiency in their high school training. However, average grades in the current institution were in the high "B" range, at approximately 86 or 87. When compared to average high school grades, and given the need for developmental course work, it would appear that grading scales at these institutions are relatively high. An added factor for consideration is that 42 percent of the sample said they spent more than an average amount of time on the course from which they were picked to be part of the sample (about 45 percent of the respondents said they spent an average amount of time on that course). Although the selection of students was supposed to be random, this seeming overemphasis on the current course may indicate that the teacher selected some of the better students. It may also just indicate that the student thought the teacher might see the responses. If there was selection bias, however, interpretation of the sample results must be qualified on that basis.

Students did not commonly take individualized courses, such as those taken with the assistance of a microcomputer. The mean number of such courses was one, but this distribution is again skewed by a few students who have taken many such courses. The majority of students have taken no individualized courses. Cooperative education program students are represented by 13 percent of this sample, which would allow more detailed analysis of aspects of that subpopulation than will be possible in this chapter.

Finally, the great majority of students expect to complete their programs, with 93 percent of students responding in the affirmative. Although it is likely that only a much smaller percentage of students will actually complete their programs (unless the sample is seriously biased), it is not surprising to find that students are generally optimistic about their chances of completion. If they did not think they would complete it they would probably have dropped out already. Of those who do not expect to complete their programs, over half expect to transfer first, which is quite different from expecting to drop out.

Responses to attitudinal questions provide some additional information about the educational experiences of the students. They were asked whether they strongly agreed, moderately agreed, moderately disagreed or strongly disagreed, with a set of statements. The percent who strongly or moderately agreed with the statements in displayed in the last part of exhibit 10-3. The students appear pleased with the instructors as measured by the 94 percent that agreed that, on average, the instructors seemed to care a lot about the students. Most also felt that the school's equipment and library facilities were good. About three-quarters agreed that the course work was harder than in high school, which is not as high as one might expect, except that average college grades in this sample are higher than average high school grades. A fairly high number, 47 percent, agreed that they had no idea how hard the courses would be when they first entered, which could imply either that students had low abilities or low expectations, more likely the latter. Student responses were mixed on whether the students at the school had a lot of school spirit, and not very many, 28 percent, agreed that the school's placement of students in jobs after graduation was not as good as advertised. The upshot of these responses is that students appear relatively satisfied with their current educational experience.

Employment and Training Characteristics

The relevance of employment and training experiences for current educational program is twofold. First, all such experiences are forms of human capital acquisition in that they often result in skills, either direct occupational skills or more general maturity and responsibility, that enhance performance in future jobs and also possibly in future skill-acquiring situations, such as schooling. For example, one might expect those with considerable work experience to be more serious students. Second, concurrent work or training limits the time available to devote to schooling.

Exhibit 10-4 presents a summary of employment and training characteristics of these students. A majority of students are currently employed for pay--56 percent. The average job tenure is

EXHIBIT 10-4

EMPLOYMENT AND TRAINING CHARACTERISTICS OF STUDENTS

Characteristic	Mean or Percent	Percent of sample Relevant
Current Employment		
Currently employed for pay	56%	100%
Years at current job	2.3	56
Occupational category of current job:		56
Professional, technical, managerial	19%	
Clerical, sales	40	
Service	19	
Agricultural, fishery, forestry	3	
Processing	1	
Maching trades	6	
Benchwork	3	
Structural work	4	
Miscellaneous	3	
Hours worked last week	28	56
Average hourly wage	$6.03	56
Employer knows about school	98%	56
Employer accommodates school schedule	86%	56
Job related to current course of study	61%	56
Information/referral source for current job:		56
Newspaper ad	12%	
Friend or relative	43	
State employment agency	3	
High School teacher or counselor	2	
College/institution staff member	17	
Listed in placement office	5	
Other	20	
Average number of prior jobs	2.2	100
Military		
Ever served in the Armed Forces	13%	100
Received military training related to current course of study	41%	13
Government-Sponsored Training Agency		100
None	90%	
From CETA or JTPA	7	
From a labor organization	1	
From a community-based organization	1	
Completed training	55%	10
Still enrolled in training	37	10
Provided formal instruction in basic academic skills	50	10
Training related to current course of study	69	10

somewhat skewed, with an average length of 2.3 years, but a median length of just 0.9 years. The majority of those working are in clerical and sales or service occupations, at 40 percent and 19 percent respectively, but 19 percent are in professional, technical, and managerial occupations. Only 20 percent are in the generally blue-collar occupations.

Those employed are a mixture of full-time and part-time workers. Mean hours worked last week was 28 hours, with a median of 25 hours. However, the most common response was 40 hours (16 percent of those working), with about 34 percent working 35 hours or more. Their average wage was $6.03 per hour, but this distribution is also somewhat skewed, with a median of $4.74 per hour. At mean hours and wages, the expected weekly gross earnings of those employed is $168.84. In almost all cases the students' employers know about and accommodate their schooling.

Many of the jobs are at least somewhat related to the students' current courses of study; only 39 percent of those employed said their jobs were not at all related to their schoolwork. However, the most common source of information leading to their current job was friends or relatives--43 percent. The lower frequencies of sources that might be expected to lead to school-related work--17 percent for college staff members and only 5 percent for placement office listings--leads to the conclusion that in many cases schoolwork was chosen to be relevant to the current job rather than vice versa. This is not surprising, of course; it is merely an interesting indirect source of information about the motivations of the students.

Prior work or training experience comes from three sources. First, most students listed some prior job experience on the survey. Only 18 percent did not give any information about prior jobs, while 14 percent listed five or more previous jobs. The mean number was 2.2. Because of the relative difficulty of filling out this survey, this figure is almost certainly biased downwards.

A second source of training investigated was military experience. When asked whether they had ever served in the Armed Forces, including the National Guard and the Reserves, 13 percent responded in the affirmative. Of those, 41 percent claimed to have received training that was related to their current course of study--more evidence that schoolwork is often chosen to complement prior skills.

Finally, information was obtained about students' experiences in government-sponsored training programs. Just under 10 percent had received such training, mostly in programs sponsored under the Job Training Partnership Act (JTPA), or its predecessor, the Comprehensive Employment and Training Act (CETA). A sizable number, 37 percent, were still enrolled in the program. 55 percent, or 87 percent of those no longer enrolled, had completed the program (this is relatively high). About half received some classroom or individualized instruction in reading, writing, or arithmetic, and 69 percent claimed that the training was relevant to the current course of study. If remedial academic training is considered relevant to current academic or vocational training, much of the relevance of JTPA/CETA training is explained.

This concludes the presentation of univariate statistics from the student survey. A wide range of information useful in the analysis of students' experiences and motivation was found. In many cases, the results agree with previous studies or with prior expectations, and thus tend to validate the survey. However, some differences from other studies do occur, and could either point to dissimilarities or weaknesses in methodology or to a need for further research on these subjects. The next section investigates student current educational characteristics in more detail.

Analysis of Current Educational Characteristics

In this section, the correlates of some educational characteristics of particular interest are examined in more depth. These characteristics are the type of degree the student is currently working on, whether the student expects to complete the program, and whether the student has attended other colleges. The first two are important measures of outcomes, and the fact that they are expected outcomes rather than actual ones is important for several reasons. First, any interpretation of results must account for the fact that they are almost certainly upwardly biased measures of actual outcomes; it is more common to fall short of ambitions than to surpass them. Second, it serves to differentiate this study from those which examine actual outcomes, in that goals are important for their own sake, and are generally necessary conditions for successful outcomes. Third, when a follow-up survey of these students is performed and actual outcomes are observed, knowledge of original goals as stated prior to the outcome itself is valuable information in evaluating the degree to which the actual outcome represents success, failure, or compromise. As for the third characteristic to be analyzed, it measures the reverse transfer phenomenon, an interesting aspect of postsecondary education behavior.

Exhibit 10-5 displays the type of degree currently being worked on cross-tabulated by various subgroups of the sample. The probability that that characteristic is unrelated to the choice of degree program was calculated and for all characteristics shown, the probability of no relationship is 1 percent or less ($p<=.01$).

EXHIBIT 10-5

TYPE OF DEGREE CURRENTLY WORKING ON BY SELECTED CHARACTERISTICS

Characteristic	Degree				
	Voc. cert.	Asso. deg.	Bach. deg.	Other	None
Age					
18-19 years	40%	44	8	3	4
20-24 years	23%	54	18	3	2
25-39 years	33%	46	8	5	9
40 and over	32%	42	5	4	17
Disabled					
Yes	37%	45	7	5	6
No	29%	49	12	4	6
High school program					
General	36%	45	8	5	6
Academic	17%	55	18	3	7
Vocational	37%	46	7	4	6
Currently employed					
Yes	24%	52	13	3	7
No	37%	44	9	5	5
Live separately from parents					
Yes	31%	45	10	5	9
No	28%	53	13	3	3
Loan recipient					
Yes	28%	50	17	4	3
No	30%	48	10	4	7
Status					
Full-time	31%	50	12	4	2
Part-time	22%	44	9	5	20
Co-op student					
Yes	28%	56	10	4	1
No	30%	47	12	4	7
Expect to complete program					
Yes	30%	49	11	4	5
No	17%	35	12	6	18

EXHIBIT 10-5 (Continued)

Characteristic	Degree				
	Voc. cert.	Asso. deg.	Bach. deg.	Other	None
Attended other colleges					
Yes	26%	48	14	4	8
No	32%	49	10	4	6
Course work harder than high school					
Strongly disagree	54%	24	5	4	13
Moderately disagree	44%	37	3	7	9
Moderatly agree	27%	54	11	4	5
Strongly agree	19%	54	20	3	4
Mean cost per credit hour	$18	$30	$53	$16	$16

Students just out of high school, 18 or 19 years of age, are the most likely group to be working on a vocational certificate, with 40 percent of that age group working on one. However, 44 percent of them are working on an associate's degree, while only 8 percent are working on a bachelor's degree. It is the next age group, those 20 to 24 years old, who are most likely to be working on either an associate's degree or a bachelor's degree, at 54 percent and 18 percent respectively. The 25 to 39 year old age group is somewhat more likely than the immediately younger group to be working on a vocational certificate, and no more likely than the youngest group to be working on a bachelor's degree. The oldest age group is similar in many ways to the 25-39 group, except that they are about twice as likely not be working on any degree at all. This almost certainly represents those returning to school largely for avocational or upgrading purposes.

Those with some sort of disability are somewhat more likely than the non-disabled to be working on a vocational certificate and less likely to be working on an associate's or bachelor's degree. The differences here are not that large, however.

As would be expected, students who had an academic program in high school are much more likely to be working on an associate's or bachelor's degree, 73 percent combined compared to 53 percent for those in general or vocational programs. They are similarly less likely to be working on a vocational certificate. Students with general and vocational high school backgrounds have almost identical choices of current programs.

Interestingly, those who are currently employed are more likely to be working on associate's or bachelor's degrees than those who are not employed, even though part-time students are less likely to be in those programs. However, this is consistent with the greater financial burden of the more advanced degree programs, as seen at the bottom of the table. The mean cost per credit hour of those in bachelor's degree programs is $53, about three times as high as for those in vocational certificate programs and about 75 percent higher than those in associate's degree programs. To pay for this, those students are more likely to work, to live with their parents (those living at home are more likely to be in associate's or bachelor's degree programs), and to receive loans.

Cooperative education students are most likely to working on an associate's degree, and only slightly less likely than non-co-op students to be working on a vocational certificate or bachelor's degree. Cooperative education students are almost certain to be working on a degree of some sort, while 7 percent of non-co-op students are not.

The distribution of the variable "expect to complete the program" is virtually identical to the distribution of "degree currently working on," which is shown in exhibit 10-3 (except that those who did not respond to the question about current degree programs were not included in exhibit 10-5). Those who do not expect to complete their program are more likely to be in no degree program at all, other programs, or in bachelor's degree programs. Most of the latter group expect to transfer to another school.

The degree program distribution of student responses to the question of whether current course work is harder than in high school reveals that this response depends more on the choice of programs rather than a reverse dependence based on ability. Those who agreed that the course work was harder than in high school were much more likely to be in bachelor's and associate's degree programs, where the work likely is harder. On the other hand, those who disagreed that the work was harder are more heavily represented in the vocational certificate programs.

Exhibit 10-6 contains a breakdown of the percent who expect to complete their current program and of those who have attended other colleges by the most of the same characteristics seen in the previous exhibit. In some cases these characteristics no longer result in statistically significant differences in the analysis variables.

There is some variation by age group in the percent who expect to complete. The youngest group is 3-5 percent less likely to expect to complete the program than the older three groups. Although it is not surprising to find some difference here, one might have expected the oldest age group, with its higher percentage of nondegree students, to have a somewhat lower completion expectation. The overall variation by age group is significant at the .02 level.

Disabled students are slightly more likely to expect to finish their programs than non-disabled students, 96% to 94%. However, this difference is not statistically significant. The differences among student by type of high school program are moderately significant, but the differences are not large. Those with academic programs are slightly less likely to expect to complete, but some of that is due to expectations of transferring to another school.

There is no significant variation in expectations of completion by other things that had affected program choice. These include current employment, living arrangement vis-a-vis parents, and loan recipiency. The latter two characteristics were not included in exhibit 10-6 due to their lack of significance for expectations of completion and lack of relevance to attendance at

EXHIBIT 10-6

EXPECTATION OF COMPLETION AND ATTENDANCE AT OTHER COLLEGES, BY SELECTED CHARACTERISTICS

Characteristic	Expect to Complete 0 Program	Attendance at Other Colleges
Age		
18-19 years	91%	3%
20-24 years	95	30
25-39 years	94	49
40 and over	96	54
	p<.02	p<.01
Disabled		
Yes	96%	39%
No	94	37
	p=.22	p=.54
High school program		
General	95%	34%
Academic	93	47
Vocational	94	27
	p=.05	p<.01
Currently employed		
Yes	94%	39%
No	96	35
	p=.18	p=.03
Type of degree currently working on		
Vocational certificate	97%	32%
Associate's degree	96	36
Bachelor's degree	88	47
Other	94	39
None	82	44
	p<.01	p<.01
Status		
Full-time	95%	36%
Part-time	90	51
	p<.01	p<.01

EXHIBIT 10-6 (Continued)

Characteristic	Expect to Complete Program	Attendance at Other Colleges
Co-op student		
Yes	97%	33%
No	94	38
	p<.01	p=.05
Course work harder than high school		
Strongly disagree	97%	34%
Moderately disagree	93	32
Moderately agree	94	38
Strongly agree	94	40
	p=.26	p=.02
Mean cost per credit hour	$25 (Yes) 22 (No) p=.03	$25 (Yes) 25 (No) p=.28
Expect to complete program		
Yes	--	37%
No	--	44
		p=.06
Attended other colleges		
Yes	94%	--
No	95	--
	p=.06	

other colleges. However, one might have expected some differences in these categories due to financial commitment or ability to pay. For example, those currently employed may have more financial stability, while those living with parents might have more financial resources to call upon if needed. However, if these factors have any effects they are apparently balanced by the fact that these same groups tended to be enrolled in more advanced programs with higher costs, thus eliminating any financial advantage.

There appear to be variations in the percent who expect to complete their program by the type of degree the student is currently working on. However, the low rate for those in bachelor's programs is probably due to their need to transfer to complete their degree. Over half of the bachelor's degree students who do not expect to complete are expecting to transfer, making their adjusted completion expectations similar to other groups. It is difficult to interpret expectations of completion for the other low group, those who are not in any degree program.

Differences in expectation are seen in predictable ways between full-time and part-time students and for co-op students. Full-time and co-op students clearly have greater involvement in their programs.

Whether one finds current course work to be more difficult than in high school does not affect expectations of completion in any significant way. Those who strongly disagree that course work is harder are somewhat more likely to expect to complete, but for other responses there is no difference.

The average cost per credit hour is about $3 higher for those who expect to complete. Much of this difference is due to the low cost and low expectations for those not in any degree program.

As mentioned before, those respondents who have previously attended other colleges are an interesting subgroup of the student population. As exhibit 10-6 shows, however, they do not necessarily represent an advanced or advantaged group of students.

Naturally, those with prior college attendance are likely to be older, and this is seen clearly in the table. They are also more likely to have been in academic programs in high school, which apparently led to their initial enrollment in other schools, often 4-year colleges or universities. However, they are significantly less likely to be full-time students than those with no prior attendance.

Disabled students are slightly more likely to have attended other schools, although this difference is small and statistically insignificant. Students involved in cooperative education are significantly less likely to have attended other colleges, while those in bachelor's degree programs or not working towards any degree are significantly more likely to have attended other colleges. These results generally fit the expected profile of the reverse transfer student.

One might expect those with prior college experience to find coursework at a 2-year college relatively easy, especially since many of them had academic programs in high school. However, those who agreed that current coursework was harder than in high school were signficantly more likely to have attended other colleges. Once again, this reflects the fact that these students are more likely to be in bachelor's degree programs and that the difficulty of current coursework is more determined by the current program than by the students' abilities or backgrounds.

Evidently the combination of higher representation in both the bachelor's programs and in non-degree programs, with high and low credit hour costs respectively, causes students with other college experience not to have significantly different average credit hour costs than other students. The average difference is actually about $.83, but both round to $25.

Finally, attendance at other institutions appears to reduce, with moderate significance, the probability that students expect to complete their programs. The difference is small, however, and is due to "other reasons" for not expecting to complete, rather than due to expectations of tranferring. The converse of this is that those who do not expect to complete their programs are more likely to have attended other colleges than those who do expect to complete them, 44 percent to 36 percent. Students in non-degree programs are partially responsible for this difference. These lower expectations of students with prior attendance in this sample should not be interpreted as indicative of lower interest or ambition for the typical non-degreed transfer student without more careful multivariate analysis controlling for a variety of factors simultaneously.

Conclusion

This chapter has described and analyzed many of the responses to a survey of 3330 students enrolled in postsecondary occupational education during the 1986-87 school year. We find that these students are demographically typical of their population in most ways, although ethnic minorities appear to be somewhat underrepresented. About 10 percent classify themselves as disabled. The student sample is predominantly from public high schools, and their high school grades appear lower than average while their college board scores appear higher than average.

Three out of eight have attended other colleges, but only three percent of all the students already have a bachelor's degree and another three percent already have an associate's degree.

The students are more likely to be full-time and to be beginning their second year. Almost half are currently seeking an associate's degree but many plan to eventually get a bachelor's degree or higher. More than half of the students are currently employed and 93 percent expect to complete their program. Cooperative education students, those with extensive prior work experience, those with military experience, or those with government-sponsored training are all represented in this sample.

Cross-tabular analyses of current educational characteristics with background information were performed. The type of degree the student was currently working on was seen to be significantly related to a number of characteristics, including age, disability status, type of high school program, current employment, full-time/part-time status, loan recipiency, co-op status, expectation of completing the program, attendance at other colleges, attitude about the difficulty of coursework, and tuition costs. Expectations of completion and attendance at other colleges were found to be significantly related to some but not all of these things. However, further research should apply more sophisticated multivariate analysis to these correlations to determine the full underlying relationships. In addition, a followup survey that obtains the actual educational and employment outcomes for these students will provide valuable and interesting material for research and policy development.

CHAPTER 11

EDUCATIONAL EXCELLENCE IN POSTSECONDARY OCCUPATIONAL EDUCATION INSTITUTIONS

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Introduction and Content

Most people develop opinions based on pictures in the head rather than on facts. The pictures in the head about excellence in education are based primarily on the notion that there is only one kind of talent and that all students are, or should be, headed for a college-prep/baccalaureate-degree program. The facts simply do not support such a view. The 1980 Census revealed that seventeen percent of the American population twenty-five years of age and older held a baccalaureate degree. Even given a dramatic growth of baccalaureate-degree holders during this decade, at least three out of four students in the public schools are unlikely to achieve a baccalaureate degree.

Interpreting Excellence

The educational community is not alone in forming unrealistic images of excellence and imposing them on the American people. Madison Avenue has developed an advertising image of excellence based upon a thin, attractive, white family, confident and happy in its meticulously landscaped and spacious suburban home. Each morning, after breakfast which provides fiber and builds bodies twelve ways, two children, perfectly groomed, emerge from a model kitchen and skip off to the neighborhood school, as meticulously landscaped and spacious as the family home. Presumably, within the allotted time, they will be graduated. Then, with little or no effort, they will continue their education at the university whose pennants are already mounted on their artfully decorated bedroom walls.

Faced with such an artificial image of excellence, one can understand the chagrin and frustration of the ordinary student who has never entered such a world and of the local school board member who, during a school board meeting, jumped to his feet and informed his colleagues, with tongue in cheek: "I am so disgusted with our schools. Why, do you know that half of our students are below average?"

In some institutions of higher education, the definition of excellence begins and ends with the admissions process. Excellence will be more or less automatic if the entrance-screening process has been thorough in sorting and screening the academically talented from the not-so-talented. There is nothing inherently wrong with tough admissions standards as long as we do not allow college-entrance requirements to be viewed as the only key to excellence in a universal education system.

Comprehensive community colleges and other postsecondary occupational education institutions work on the basis of a not-so-visible or dramatic definition of excellence. They seek the development of a highly diverse potential in all students. Certainly colleges want a well-prepared entering student. However, there are many kinds of talents and many kinds of excellence. The two-year institutions focus on progress in learning and in value added: where was the student upon entry and did he or she make progress?

One of the pressing dilemmas for educators is how to meet the great range of individual differences among students while seeking the best in all people, whether rich or poor, able or disabled, destined for the university, community college, apprenticeship, military, or a specific job, including homemaking. To that end, we must learn to ignore the assumption that a baccalaureate degree is the sole road to excellence, respect, and dignity for all people. Social and educational status cannot be confused with equality of opportunity and individual achievement, regardless of the field of study. It will be a sad day indeed if the "excellence movement" becomes a cover for a retreat from equity and opportunity concerns. As stated by the Commission on Pre-College Education in Mathematics, Science, and Technology, "Excellence and elitism are not synonymous." (Coleman, et al. 1983) Clearly, American education requires a new definition of excellence in education, a definition that will hold meaning for all students.

Change

We are living in the time of the parenthesis, the time between eras, John Naisbitt tells us. "It is a time of ambiguity, of change, and questioning, a time electric with possibilities, when a single model for achievement will always be limiting, a time when those able to anticipate the new era will be a quantum leap ahead of those who hold on to the past." (Naisbitt, *Megatrends*, 1984) Frankly, some new models are required for education based upon individual student needs and the needs of a rapidly changing society.

If a higher quality of work life is to become a reality for millions of Americans, perhaps the most fundamental emerging truth is that higher and more comprehensive skills must be developed, particularly by the middle two quartiles of the work force. More sophisticated manual as well as conceptual skills will be in demand, and this worker cohort will be pushed consistently to handle a broader range of requirements. Tasks once reserved for baccalaureate-degree or advanced-degree performers will be assumed by those with fewer years of education and training, and all workers will find it essential to learn throughout their careers in order to remain useful. Not only do we anticipate that these demands will surface in the future, but we know what human resources will be available to meet these demands: all who will be part of the work force in the year 2000 are alive today. Thus, we can extrapolate much from the age, sex, ethic, and regional mixes about the kind of individual working at any level.

It just may be easier to create an information-age society than to maintain one. Since we know less about job replacement than job placement, more about training than retraining, and more about excellence in some aspects of education than in others, we must learn quickly new skills of program coordination and continuity in order to provide greater structure and substance in the learning process for all individuals.

We have been told that in the future there will be a greater number of individuals in our society working at low-skill jobs, i.e., as clerks, custodians, waiters. But sheer volume does not give an accurate picture of job replacements or of future employment skill needs, especially of the new career competency requirements created by an information society. Certainly, there have been and will continue to be a large number of low skill, low pay jobs requiring minimal skills. It is likely there will always be a more-than-adequate supply of individuals possessing only those minimal skills. But that tells only part of the story. "Occupational Employment Projections" lists the twenty fastest-growing occupations from 1988 through 1995 (Exhibit 11-1). None can be classified as low skill, and only two or three obviously require a baccalaureate degree for entry. The remainder of these fast-growth jobs are occupations for which some postsecondary education and training, but not necessarily a baccalaureate degree, are preferred or required.

The "product life cycle" analogy can be used to describe the last decade as we have embraced the information age. The initial "innovation" phase has been pushed along by the more advanced skills of scientists, engineers, and top-level management. However, with growth and maturity comes the "commercialization" phase. Economic history tells us that the volume of need for mid-range workers (which this report designates as technicians) will grow rapidly as various technologies move out of the development phase into the production phase of the product life-cycle.

EXHIBIT 11-1

TWENTY FASTEST GROWING OCCUPATIONS, 1982-95

Occupation	Percent Growth in employment
Computer service technicians	96.8
Legal assistants	94.3
Computer systems analysts	85.3
Computer programmers	76.9
Computer operators	75.8
Office machine repairers	71.7
Physical therapy assistants	67.8
Electrical engineers	65.3
Civil engineering technicians	62.2
Peripheral EDP equipment operators	60.7
Occupational therapists	59.8
Surveyor helpers	58.6
Credit clerks, banking and insurance	54.1
Physical therapists	53.6
Employment interviewers	52.5
Mechanical engineers	52.1
Mechanical engineering technicians	51.6
Compression and injection mold machine operators, plastics	50.3

Source: U.S. Department of Labor, "Employment Projections for 1995," Bureau of Labor Statistics, U.S. Government Printing Office, March 1984.

Technology

John Naisbitt traces the occupational history of the United States from farmer to laborer to clerk, from rural to blue-collar to white-collar America. He invites us to speculate about the new workers who will characterize the work force as we move past the parenthesis into a new era.

What is required for many occupations in the future is a broad (rather than a high) technician. That term describes an employee who:

- understands the basic principles of technology in an information age saturated with the use of technology,
- connects practice and theory in the work world,
- identifies problems and then analyzes, tests, and troubleshoots to find solutions,
- integrates the interests of complementary work areas,
- works independently with a network of individuals much of the time, under the general supervision of a highly skilled, frequently more narrowly specialized professional,
- works willingly and well with his/her hands as well as with the brain,
- has mastered a basic-skills package that includes a core of competence in math, science, computer science, and communications,
- is liberally educated to function competently as a citizen, a consumer, a family member, and a neighbor, and
- has developed the proficiencies to be a life-long learner.

The 1990's

Are we creating the crisis of the 1990's by indiscriminately imposing baccalaureate-degree program standards upon high school graduation requirements? Are such standards the answer to improving the high school education of the ordinary student? They may motivate some students, but surely they will discourage others. When seventy-five percent or more of our high school graduates do not complete the baccalaureate degree and twenty-five percent of those who begin high school do not even finish, one must question the validity of the current educational program for the great mass of individuals in the typical high school student body. What kind of educational program will meet the needs of these three out of four students? Can these students experience excellence? Will requiring more theoretical physics or theoretical math meet their needs and abilities? Some fundamental shifts must be made in school and college programs if the needs of all students are to be met. Comprehensive high schools and community, technical, and junior colleges must be concerned with improving programs and performance of the ordinary student along with the baccalaureate-degree-bound student.

Postsecondary Occupational Education Institutions' Response to the Excellence Movement

The precise objectives of this study included a description of how curricular and instructional decisions are made in occupational programs at public and independent postsecondary institutions, to characterize curricula and instructional processes, and to relate outcomes to institutional characteristics. In addition, the project was to gain an understanding of students' motivations for attending these institutions and to gauge how well these institutions are fulfilling individual goals given the diversity of educational and cultural backgrounds of students.

The data collection design that was developed involved the dual approaches of conducting a mail survey of a large number of institutions and undertaking on-site case studies at a subsample of the institutions. Some of the interview questions from the on-site visits of the various institutions that are relevant to the excellence movement included questions such as:

1. **What innovative programs or practices are being undertaken at your institution that you are most proud of and what effects are they having?**

Responses were as follows:

A. Culinary Arts Program--best there is in the country at a two-year institution

B. Office Automation Program--excellent utilization of latest technological equipment

C. University studies program--includes total revision of general education; revolves around nine objectives (cognitive to psychomotor)

D. Short-term intensive training programs which include credit and non-credit offerings

E. Initiated articulation agreement with four-year college on a program by program basis

F. Open entry/exit, competency based for vocational education programs

G. Unique job placement service that includes cooperative education, job service and placement in one function

2. Is your institution tightening admission grading or hiring standards or doing anything else in response to the general movement towards excellence in education?

Responses were varied and very informative:

A. Don't want state-wide testing, but there is pressure

B. Working at improving basic skill instruction without lowering standards

C. Conducting pre-entrance testing in Math, Communications, and General Aptitude tests (GATB).

D. Institutional emphasis on students' success, and what college can do to help students achieve academic goals

E. Faculty competency/skills must be updated, in addition to equipment

F. Expand Business and Industry linkages

G. Assessment procedures have been initiated and admission requirements have been tightened. Institutional goal is to bring students up to par within a semester or a year (does not want to be identified as a remedial institution)

H. On-going responses to technological change in its technical programs are updated and currently responsive to area employers' needs. These linkages have been carefully cultivated and are acknowledged as very valuable

I. Value-added program--course required of students for three or four semesters--humanities course--oversees all disciplines

J. Open admissions--always trying to pursue excellence

Throughout all the on-site interviews conducted in the study, all components relevant to improved educational delivery toward the goal of excellence were found to have been ongoing. Those include the need to formally evaluate faculty, update their skills and provide all the necessary support, such as up-to-date equipment. Also, many other areas such as assessment, basic skills, and developmental education, have been under constant review and revision.

Lastly, and probably most importantly, is the need to provide the necessary leadership and guidance from the top administration. The interviews indicated overwhelmingly the need for the top person to delegate wherever possible and he/she must be task- and people-oriented in order to succeed.

Case Studies of Policy Initiatives Responding to the Excellence Movement

The survey data and on site visits provide a general picture of how postsecondary occupational education has responded to excellence concerns recently. In addition, this section of the paper discusses policy initiatives that have been established throughout the country related to educational excellence by State Boards of Education, Community College Boards, and Boards of Higher Education.

Specifically in Illinois, the Illinois State Board of Education, Department of Adult Vocational and Technical Education (ISBE/DAVTE) affirmed that an important responsibility of the system of public education is to contribute to the preparation of students for entry into employment. The Board has pursued its responsibilities in this area within the framework of the following policy:

- Education for employment programs will share in meeting the fundamental responsibilities of public education to:
    a) assure that all students, youth or adult, attain appropriate levels of achievement in areas fundamental to their continuing development; and

    b) assure that all students attain a satisfactory level of achievement appropriate to either immediate employment or advanced education in preparation for later employment.
- Equal educational opportunities will be assured to all students by providing access to education for employment programs and services in a nondiscriminatory and equitable manner.
- Education for employment programs will be provided to youth and adults through a regionally organized secondary delivery system and the existing system of community colleges.
- Education for employment programs that are supported with state and federal funds will be responsive to the changing nature of the labor market, to technological advances, to the changing characteristics of the work force, and to the academic, technical, and attitudinal development of their students

- Education for employment programs and services will include a systematic program of curriculum renewal, staff development and equipment modernization, each developed in conjunction with employers in their geographical area.

At the same time the State Board of Education approved the new policy statement on education for employment and an administrative plan was accepted as the basis for detailed activity in the months and years ahead. The administrative plan provided the framework for addressing quality, access, and efficiency--three principles recognized as important elements for the education for employment program.

Quality will be assured if the facilities and equipment are state-of-the-art, if instructors have the opportunity to upgrade their instructional and technical skills, and if the curriculum is current and well organized. It is important to place priority on the need for students to learn reading, writing, and computational skills, in addition to those of a technical and attitudinal nature. In short, programs will help students learn those transferable skills that will help them in a wide variety of occupational and educational settings.

Access will be assured if youth and adults can participate in programs that have previously been unavailable to them. By sharing instructors and facilities, the regional systems and community colleges are able to offer new programs and improve others.

Efficiency will be assured if, by taking advantage of economies of scale, programs within a geographic area have a lower cost per individual agency. While the education for employment initiative notes the importance of focusing on program quality (doing the right things), it notes also the need for efficiency (doing things right). The shared involvement of instructors and facilities, as well as the use of modern technology, are but a few examples of ways in which local agencies are able to offer a high quality, efficient program.

A second case of interest occurred in September 1986 when the Illinois Board of Higher Education adopted recommendations of the Committee on the Study of Undergraduate Education as the state's policy to improve undergraduate education in Illinois. The Illinois Community College Board and Illinois Board of Higher Education staffs conducted workshops and made presentations to the system regarding the implementation of these recommendations. Essentially, the recommendations place the responsibility for the maintenance and improvement of undergraduate education with the local colleges' administration, faculty, students, and governing board.

The Illinois Board of Higher Education policy on undergraduate education calls for the colleges to "assist in improving the preparation of students by informing potential students, parents, and schools of expectations for adequate academic preparation, and by assisting schools in strengthening the preparation of high school students."

Another article related to educational excellence has been prepared by Dale Parnell, President of AACJC. Recently, in his paper identified, "Excellence in Education: How to Attain it?," he indicated that the answer to how we can ensure that excellence is cultivated in our schools and colleges can be best addressed via supporting and energizing the work of our regional accreditation associations. Where else in our society will we find such an excellent cross-section of educational leaders engaged in a dialogue on quality of education issues? Accreditation associations require self-study and peer review in making judgments about programs and institutions. Self-regulating accreditation associations have the power to shape the arguments and the environment that are favorable to good practice in education. Essentially, the accreditation process is a key tool to help our educational institutions in their unending quest for educational quality.

One of our challenges is to help our educational leaders to clearly see the accreditation process as vital to the cultivation of excellence. There are some educators who participate little in the work of the accreditation enterprise and tend to operate alone. At the same time, they enjoy the benefits of the extensive work stimulated and coordinated by other school and college leaders, without providing much participation or support. An energetic and effective regional accreditation association can have a major impact on the process of cultivating excellence in education because it is about the only grassroots, networking organization with the capacity to formulate and represent the composite of school and college views and concerns on a regional basis.

Suggestions for Increasing Excellence

Excellence in education cannot be achieved by pronouncements, politics, or postulates. It will not even be achieved by pursuit of excellence. Excellence in education cannot be caught. It can only be cultivated, challenged, and celebrated.

To cultivate means to prepare for growth--to promote or improve the growth of something by labor and attention. How many times have you heard schools and colleges use the slogan, "Cultivating Excellence?" Whether a high school sends all or most of its students to college; whether a community college specializes in university-parallel courses, or technical education, or developmental education; whether a university stresses professional courses over the liberal arts; whether the students are old or young, black or white, full-time or part-time, are not the issues in cultivating excellence in education. What does matter is how faithfully schools and colleges are seeking the best in all their students rather than in just some of them, and how closely they are following their own institutional beliefs, articles of faith, and sense of mission.

How do we begin to ensure that excellence is cultivated in our schools and colleges? Seven specific recommendations are offered here for consideration:

1. All students need a student-centered curriculum. We must rethink our definition of excellence in high schools and colleges. Can one program or one definition of excellence be applicable for all aspects of education and for all students? Can we develop winners from ordinary people as well as from the academically talented and gifted? Or is education only a process of sorting out and selecting the winner? We must begin to identify and remove the barriers to achieving excellence in education for all students.

2. All students must experience greater structure and substance in their educational programs. When all the rhetoric is blown away from the various reports on improving education, one would not be far off the mark to summarize the recommendations as calling for greater structure and more substance in the high school. Unfocused learning simply will not produce excellence.

3. Students must see coherence in their educational programs. Clear signals must be given high school faculty, students, and their parents about the role of preparatory requirements for succeeding in a community, technical, or junior college. Open admissions and open doors cannot be interpreted to mean that preparation is unimportant. Much greater attention must be given the exit requirements of those colleges in communicating with high school students. Much greater attention must also be given to coherence in the curriculum, calling for closer program articulation between high schools and postsecondary institutions.

4. Students must see connectedness between what they do and the larger whole--between education and the rest of the world. It is time to review the concept of career education. Such a review may provide the connecting link between the liberal arts and vocational education as well as a new definition of excellence in education. The walls must come down between vocational education and the liberal arts. Students preparing to meet the demands of the information age need both.

5. Students must experience continuity in learning. The loss of continuity in learning is profound for many students. This loss is often the result of a highly mobile society where people move from one community to another. More often, loss of continuity in learning can be attributed to student absenteeism or to just plain disinterest in the school program. However, schools and colleges must share some of the blame for loss of continuity in learning. Little attention has been given to the connecting links and coordination of the curriculum between high school and colleges.

6. Students must be offered a larger range of choices, so that their lives and work are not unnecessarily degrading, boring, or limiting. The information age and the demands of technical education require some new thinking about the vocational-technical programs in high schools and community colleges. The high school vocational education curriculum must aim at preparing students for broad careers rather than for specific jobs.

7. Students must see the necessity to continue to learn throughout a lifetime and to develop the competencies to become life-long learners. It is fundamental to the schooling process that it help individuals to develop the capacity to grow and to change throughout their lives.

Excellence in education is inevitably linked to the larger issue of human resource development in our country. We must seek the best in all our citizens to fully utilize our human resources.

APPENDIX A

STATISTICAL TABLES

TABLE A-1

BOARD OF TRUSTEE CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Average number of members	9.6	9.0	16.8	10.6
Average number elected by public	3.0	3.5	1.5	2.9
Average number appointed by elected official	4.4	3.7	5.0	4.2
Average number of business reps.	4.6	5.1	7.6	5.3
Average number of labor reps.	0.5	0.7	0.4	0.5

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of community and junior college respondents is 191; technical institutes--117; and colleges and universities--67.

TABLE A-2

BOARD OF TRUSTEE CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Average number of members	13.4	9.8	11.3	10.6	10.6
Average number elected by public	0.9	3.5	2.5	4.6	2.9
Average number appointed by elected official	5.4	2.8	5.5	2.2	4.2
Average number of business reps.	6.9	4.3	6.2	2.9	5.3
Average number of labor reps.	0.7	0.5	0.5	0.6	0.5

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of respondents in Northeast is 57; North Central--98; South--161; and West--61.

TABLE A-3

PERCENTAGE OF INSTITUTIONS REQUIRING BOARD OF TRUSTEE APPROVAL FOR VARIOUS ADMINISTRATIVE ACTIONS, BY TYPE OF INSTITUTION

Action	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Discontinuation of a course offering	21.28%	46.02%	11.11%	27.05%
Discontinuation of a program	73.02%	69.91%	56.67%	69.23%
Establishing a new course offering	31.38%	56.14%	14.06%	35.87%
Establishing a new program	88.89%	79.46%	74.60%	83.33%
Faculty/staff service on a community board (e.g., PIC)	6.99%	20.72%	1.61%	10.28%
Application for federal funds	44.09%	57.52%	25.42%	45.13%
Hiring faculty	64.92%	68.42%	55.56%	64.23%
Dismissing faculty	65.08%	66.67%	46.77%	62.40%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of community and junior college respondents is 191; technical institutes--117; and colleges and universities--67.

TABLE A-4

PERCENTAGE OF INSTITUTIONS REQUIRING BOARD OF TRUSTEE APPROVAL FOR VARIOUS ADMINISTRATIVE ACTIONS, BY CENSUS REGION

Action	Region of the Country				Total
	Northeast	North Central	South	West	
Discontinuation of a course offering	25.00%	25.26%	29.11%	26.23%	27.05%
Discontinuation of a program	66.67%	68.48%	68.35%	75.00%	69.23%
Establishing a new course offering	27.78%	32.63%	34.81%	50.82%	35.87%
Establishing a new program	81.48%	84.04%	80.25%	91.80%	83.33%
Faculty/staff service on a community board (e.g., PIC)	16.67%	7.45%	9.15%	11.86%	10.28%
Application for federal funds	39.22%	48.39%	42.21%	52.46%	45.13%
Hiring faculty	53.70%	73.96%	58.60%	72.58%	64.23%
Dismissing faculty	55.56%	70.83%	53.50%	78.33%	62.40%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of respondents in Northeast is 57; North Central--98; South--161; and West--61.

TABLE A-5

MEAN INVOLVEMENT RATING OF INSTRUCTIONAL STAFF IN INSTITUTIONAL DECISION MAKING, BY TYPE OF INSTITUTION

Decision/Action	Institution Type: Community and Junior Colleges	Institution Type: Technical Institutes	Institution Type: Colleges and Universities	Total
Searches for administrative staff	3.36	2.35	3.14	3.02
Institution's calendar	3.35	3.16	3.24	3.27
Promotion/retention of faculty	3.92	2.75	4.55	3.68
Institution's mission	3.93	3.84	4.03	3.92
Budget	3.94	3.55	3.76	3.79
Instructor evaluation	4.24	3.20	4.42	3.95
Administrator evaluation	2.72	2.31	2.77	2.61
Grading standards	4.73	4.32	4.76	4.61
Prof. development activities	4.41	4.12	4.40	4.32
Facilities and equipment	4.15	4.13	4.02	4.11

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of community and junior college respondents is 191; technical institutes--117; and college and universities--67. Rating scale ranges from 1 = No involvement to 5 = High level of involvement (see question 4).

TABLE A-6

MEAN INVOLVEMENT RATING OF INSTRUCTIONAL STAFF IN INSTITUTIONAL DECISION MAKING, BY CENSUS REGION

Decision/Action	Region of the Country				Total
	Northeast	North Central	South	West	
Searches for administrative staff	3.17	2.99	2.76	3.61	3.02
Institution's calendar	3.29	3.28	3.13	3.60	3.27
Promotion/retention of faculty	4.09	3.71	3.52	3.68	3.68
Institution's mission	4.08	3.68	3.97	4.05	3.92
Budget	3.55	3.89	3.69	4.07	3.79
Instructor evaluation	3.94	3.70	4.10	4.00	3.95
Administrator evaluation	2.13	2.58	2.69	2.88	2.61
Grading standards	4.67	4.62	4.52	4.74	4.61
Prof. development activities	4.31	4.41	4.23	4.38	4.32
Facilities and equipment	4.19	4.15	4.06	4.12	4.11

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of respondents in Northeast is 57; North Central--98; South--161; and West--61. Rating scale ranges from 1 = No involvement to 5 = High level of involvement (see question 4).

TABLE A-7

MEAN INVOLVEMENT RATING OF ADMINISTRATION IN INSTITUTIONAL DECISION MAKING, BY TYPE OF INSTITUTION

Decision/Action	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Searches for administrative staff	4.79	4.64	4.78	4.74
Institution's calendar	4.62	4.68	4.45	4.61
Promotion/retention of faculty	4.66	4.74	4.70	4.69
Institution's mission	4.69	4.83	4.80	4.75
Budget	4.86	4.91	4.89	4.88
Instructor evaluation	4.26	4.74	4.20	4.41
Administrator evaluation	4.66	4.02	4.68	4.48
Grading standards	3.68	4.38	3.68	3.90
Prof. development activities	4.46	4.68	4.39	4.52
Facilities and equipment	4.70	4.86	4.75	4.76

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of community and junior college respondents is 191; technical institutes--117; and colleges and universities--67. Rating scale ranges from 1 = No involvement to 5 = High level of involvement (see question 4).

TABLE A-8

MEAN INVOLVEMENT RATING OF ADMINISTRATION IN INSTITUTIONAL DECISION MAKING, BY CENSUS REGION

Decision/Action	Region of the Country				Total
	Northeast	North Central	South	West	
Searches for administrative staff	4.80	4.76	4.69	4.80	4.74
Institution's calendar	4.80	4.56	4.61	4.52	4.61
Promotion/retention of faculty	4.76	4.75	4.66	4.64	4.69
Institution's mission	4.86	4.69	4.74	4.80	4.75
Budget	4.91	4.88	4.86	4.88	4.88
Instructor evaluation	4.23	4.52	4.38	4.45	4.41
Administrator evaluation	4.77	4.41	4.35	4.64	4.48
Grading standards	3.74	3.85	4.00	3.86	3.90
Prof. development activities	4.52	4.58	4.48	4.51	4.52
Facilities and equipment	4.85	4.79	4.72	4.71	4.76

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of respondents in Northeast is 57; North Central--98; South--161; and West--61. Rating scale ranges from 1 = No involvement to 5 = High level of involvement (see question 4).

TABLE A-9

MEAN INVOLVEMENT RATING OF BOARD OF TRUSTEES IN INSTITUTIONAL DECISION MAKING, BY TYPE OF INSTITUTION

Decision/Action	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Searches for administrative staff	2.62	2.77	2.59	2.66
Institution's calendar	2.66	2.81	2.00	2.59
Promotion/retention of faculty	2.83	2.97	2.49	2.80
Institution's mission	4.32	4.01	4.41	4.24
Budget	3.85	3.69	3.94	3.83
Instructor evaluation	1.54	1.68	1.45	1.57
Administrator evaluation	2.62	3.24	2.90	2.85
Grading standards	1.80	2.05	1.48	1.82
Prof. development activities	2.20	2.47	1.93	2.24
Facilities and equipment	3.48	3.42	3.21	3.41

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of community and junior college respondents is 191; technical institutes--117; and colleges and universities--67. Rating scale ranges from 1 = No involvement to 5 = High level of involvement (see question 4).

TABLE A-10

MEAN INVOLVEMENT RATING OF BOARD OF TRUSTEES IN INSTITUTIONAL DECISION MAKING, BY CENSUS REGION

Decision/Action	Region of the Country				Total
	Northeast	North Central	South	West	
Searches for administrative staff	2.60	2.80	2.50	2.88	2.66
Institution's calendar	2.22	2.86	2.32	3.16	2.59
Promotion/retention of faculty	2.81	2.97	2.53	3.19	2.80
Institution's mission	4.28	4.38	4.06	4.42	4.24
Budget	4.12	3.74	3.70	4.02	3.83
Instructor evaluation	1.44	1.68	1.43	1.82	1.57
Administrator evaluation	2.74	3.16	2.65	2.95	2.85
Grading standards	1.62	1.70	1.94	1.91	1.82
Prof. development activities	1.81	2.31	2.32	2.31	2.24
Facilities and equipment	3.47	3.47	3.36	3.39	3.41

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of respondents in Northeast is 57; North Central--98; South--161; and West--61. Rating scale ranges from 1 = No involvement to 5 = High level of involvement (see question 4).

TABLE A-11

MEAN INVOLVEMENT RATING OF STATE AGENCY IN INSTITUTIONAL DECISION MAKING, BY TYPE OF INSTITUTION

Decision/Action	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Searches for administrative staff	1.31	1.98	1.10	1.48
Institution's calendar	1.91	2.03	1.18	1.81
Promotion/retention of faculty	1.19	1.69	1.10	1.32
Institution's mission	2.77	3.41	2.22	2.87
Budget	2.78	3.39	2.50	2.91
Instructor evaluation	1.14	1.47	1.05	1.22
Administrator evaluation	1.33	2.15	1.17	1.56
Grading standards	1.35	1.81	1.33	1.49
Prof. development activities	1.81	3.12	1.34	2.14
Facilities and equipment	2.58	3.47	2.14	2.77

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of community and junior college respondents is 191; technical institutes--117; and colleges and universities--67. Rating scale ranges from 1 = No involvement to 5 = High level of involvement (see question 4).

TABLE A-12

MEAN INVOLVEMENT RATING OF STATE AGENCY IN INSTITUTIONAL DECISION MAKING, BY CENSUS REGION

Decision/Action	Region of the Country				Total
	Northeast	North Central	South	West	
Searches for administrative staff	1.23	1.23	1.74	1.42	1.48
Institution's calendar	1.31	1.41	2.34	1.59	1.81
Promotion/retention of faculty	1.22	1.10	1.56	1.18	1.32
Institution's mission	2.26	2.84	3.13	2.78	2.87
Budget	2.42	2.79	3.22	2.75	2.91
Instructor evaluation	1.20	1.14	1.35	1.07	1.22
Administrator evaluation	1.30	1.22	1.96	1.33	1.56
Grading standards	1.30	1.18	1.84	1.28	1.49
Prof. development activities	1.57	2.15	2.51	1.67	2.14
Facilities and equipment	2.37	2.77	3.01	2.50	2.77

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of respondents in Northeast is 57; North Central--98; South--161; and West--61. Rating scale ranges from 1 = No involvement to 5 = High level of involvement (see question 4).

TABLE A-13

FACULTY CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Percent of f-t teaching staff under collective bargaining	46.70%	41.23%	16.67%	39.56%
Average percent of f-t teaching staff under tenure system	59.63%	58.63%	71.07%	61.30%
--Average percent with tenure	49.33%	48.86%	43.90%	48.00%
Mean influence rating for features affecting faculty salaries[a]				
--Quality of teaching	2.74	2.64	1.71	2.53
--Professional activities	2.98	3.06	2.02	2.83
--Community service	3.22	3.33	2.54	3.11
--Collective bargaining	2.61	2.83	3.44	2.83
--Interactions with employers	3.29	3.30	3.02	3.25
--Longevity with institution	1.57	1.43	2.12	1.62
--Full-time or part-time	1.41	1.64	1.61	1.52
--Number of courses	2.43	2.98	2.60	2.63
--Education level	1.61	1.53	1.56	1.57
--Research	3.68	3.73	2.50	3.48
Turnover. A year from now, what percentage of your teaching staff will--				
--Be teaching here	91.90%	90.24%	88.94%	90.8%
--Not be teaching at institution's initiative	1.88	2.79	3.28	2.4%
--Not be teaching at their initiative	4.12	4.50	6.33	4.7%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of community and junior college respondents is 191; technical institutes--117; and colleges and universities--67.

[a] = Influence rating scale ranges from 1 = A great deal to 4 = None (see question 6).

TABLE A-14

FACULTY CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Percent of f-t teaching staff under collective bargaining	73.58%	53.68%	10.19%	64.41%	39.56%
Average percent of f-t teaching staff under tenure system	65.77%	65.60%	53.25%	71.40%	61.30%
--Average percent with tenure	46.81%	52.38%	40.87%	60.50%	48.00%
Mean influence rating for features affecting faculty salaries[a]					
--Quality of teaching	2.31	2.60	2.36	3.03	2.53
--Professional activities	2.65	2.86	2.75	3.15	2.83
--Community service	2.96	3.25	2.99	3.44	3.11
--Collective bargaining	1.75	2.40	3.74	2.08	2.83
--Interactions with employers	3.31	3.22	3.12	3.58	3.25
--Longevity with institution	1.92	1.72	1.63	1.21	1.62
--Full-time or part-time	1.55	1.66	1.52	1.27	1.52
--Number of courses	2.72	2.61	2.66	2.49	2.63
--Education level	1.83	1.66	1.48	1.44	1.57
--Research	3.33	3.46	3.51	3.58	3.48
Turnover. A year from now, what percentage of your teaching staff will--					
--Be teaching here	87.81%	91.35%	91.93%	89.55%	90.8%
--Not be teaching at institution's initiative	2.47	2.89	2.21	2.34	2.4%
--Not be teaching at their initiative	4.60	4.60	4.78	4.74	4.7%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of respondents in Northeast is 57; North Central--98; South--161; and West--61.

[a] = Influence rating scale ranges from 1 = A great deal to 4 = None (see question 6).

TABLE A-15

MEAN RATING OF IMPORTANCE OF INSTITUTIONAL GOALS, BY TYPE OF INSTITUTION

Goal	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Prepare students to be good citizens	1.87	1.76	1.79	1.82
Develop basic skills	1.25	1.31	1.35	1.28
Develop ability to solve problems and think critically	1.45	1.47	1.35	1.44
Prepare students to be competent consumers	2.38	2.24	2.41	2.34
Prepare students for further schooling	1.54	2.29	1.97	1.85
Provide specific occupational training	1.26	1.04	1.64	1.26
Give students broad career preparation	1.68	2.12	1.54	1.80
Place students in jobs	1.69	1.17	1.77	1.54

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of community and junior college respondents is 191; technical institutes--117; and colleges and universities--67. Importance rating scale ranges from 1 = Very important to 4 = Not at all important (see question 8).

TABLE A-16

MEAN RATING OF IMPORTANCE OF INSTITUTIONAL GOALS, BY CENSUS REGION

Goal	Region of the Country				Total
	Northeast	North Central	South	West	
Prepare students to be good citizens	2.06	1.79	1.74	1.85	1.82
Develop basic skills	1.37	1.34	1.24	1.21	1.28
Develop ability to solve problems and think critically	1.37	1.50	1.45	1.38	1.44
Prepare students to be competent consumers	2.57	2.32	2.23	2.44	2.34
Prepare students for further schooling	1.89	1.95	1.90	1.55	1.85
Provide specific occupational training	1.28	1.31	1.24	1.21	1.26
Give students broad career preparation	1.65	1.82	1.83	1.79	1.80
Place students in jobs	1.52	1.48	1.52	1.72	1.54

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of respondents in Northeast is 57; North Central--98; South--161; and West--61. Importance rating scale ranges from 1 = Very important to 4 = Not at all important (see question 8).

TABLE A-17

MEAN RATING OF INFLUENCE OF VARIOUS PEOPLE OR ORGANIZATIONS ON ESTABLISHING CURRICULUM OR DETERMINING INSTRUCTIONAL APPROACHES, BY TYPE OF INSTITUTION

People/ Organizations	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
	ESTABLISHING CURRICULUM			
Chief admin. officer	1.69	1.42	1.54	1.58
Department's staff	1.10	1.06	1.12	1.09
Other departments' staff	2.31	2.57	2.32	2.39
Parents	3.58	3.38	3.41	3.49
Students	2.68	2.61	2.52	2.63
Institution's advisory board	2.08	1.62	2.32	1.98
Faculty union/ assoc.	3.31	3.48	3.48	3.39
Business and industry	1.87	1.41	2.40	1.82
JTPA/PIC	2.85	2.88	3.41	2.95
State educ. agencies	2.36	1.93	2.62	2.27
Former students	2.60	2.35	2.55	2.52
	DETERMINING INSTRUCTIONAL APPROACHES			
Chief admin. officer	2.04	1.64	1.91	1.89
Dept. chair	1.49	1.74	1.49	1.57
Instructors	1.07	1.07	1.09	1.08
Students	2.35	2.31	2.28	2.33
Advisory board	2.72	2.29	2.94	2.63
Faculty union/ assoc.	3.46	3.53	3.64	3.51
Business and industry	2.47	2.02	2.89	2.41
JTPA/PIC	3.18	3.23	3.60	3.27
State agencies	3.06	2.54	3.25	2.93

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of community and junior college respondents is 191; technical institutes--117; and colleges and universities--67. Influence rating scale ranges from 1 = A great deal to 4 = None (see question 9).

TABLE A-18

MEAN RATING OF INFLUENCE OF VARIOUS PEOPLE OR ORGANIZATIONS ON ESTABLISHING CURRICULUM OR DETERMINING INSTRUCTIONAL APPROACHES, BY CENSUS REGION

Decision/Action	Region of the Country				Total
	Northeast	North Central	South	West	
	ESTABLISHING CURRICULUM				
Chief admin. officer	1.49	1.55	1.56	1.75	1.58
Department's staff	1.13	1.05	1.12	1.05	1.09
Other departments' staff	2.35	2.41	2.39	2.39	2.39
Parents	3.53	3.40	3.42	3.77	3.49
Students	2.64	2.57	2.67	2.61	2.63
Institution's advisory board	2.16	1.97	1.92	2.00	1.98
Faculty union/ assoc.	3.11	3.25	3.65	3.18	3.39
Business and industry	2.00	1.80	1.78	1.80	1.82
JTPA/PIC	3.30	2.79	2.99	2.78	2.95
State educ. agencies	2.60	2.24	2.10	2.48	2.27
Former students	2.64	2.37	2.49	2.72	2.52
	DETERMINING INSTRUCTIONAL APPROACHES				
Chief admin. officer	1.91	1.81	1.88	2.06	1.89
Dept. chair	1.71	1.57	1.51	1.61	1.57
Instructors	1.05	1.06	1.11	1.05	1.08
Students	2.39	2.26	2.36	2.28	2.33
Advisory board	2.98	2.52	2.54	2.72	2.63
Faculty union/ assoc.	3.48	3.39	3.68	3.28	3.51
Business and industry	2.68	2.44	2.30	2.38	2.41
JTPA/PIC	3.47	3.19	3.26	3.24	3.27
State agencies	3.35	2.90	2.74	3.11	2.93

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of respondents in Northeast is 57; North Central--98; South--161; and West--61. Influence rating scale ranges from 1 = A great deal to 4 = None (see question 9).

TABLE A-19

LEVEL OF AGREEMENT WITH FACTORS THAT INFLUENCE CURRICULUM AND INSTRUCTION, BY TYPE OF INSTITUTION

Factors	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
a. Inadequate student preparation in basic skills restricts curriculum	3.50	3.74	3.35	3.56
b. P-t instructors constrain effective instruction	2.03	2.43	2.20	2.19
c. Outdated facilities restrict curriculum/instruction	3.17	3.31	3.27	3.24
d. Resources spent on non-instructional purposes are excessive	2.04	2.01	2.14	2.04
e. Student discipline problems restrict instruction	1.72	2.15	1.95	1.90
f. Students work and have limited time to study which constrains instruction	2.95	2.96	2.76	2.93
g. Collective bargaining of faculty restricts curriculum	2.49	2.45	2.37	2.46
h. Inadequate student preparation in science/math restricts curriculum	3.32	3.40	3.33	3.36
i. Community, faculty, or student pressures restrict course cancellations	2.37	2.32	2.29	2.35
j. Inadequate funding restricts curricula	3.70	3.59	3.71	3.67
k. Competition for students causes us to offer programs we otherwise would not offer	1.99	2.11	2.36	2.10
l. Open-entry policy restricts programs	2.04	2.06	2.17	2.08

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of community and junior college respondents is 191; technical institutes--117; and colleges and universities--67. Level of agreement scale ranges from 1 = Strongly disagree to 5 = Strongly agree (see question 10).

TABLE A-20

LEVEL OF AGREEMENT WITH FACTORS THAT INFLUENCE CURRICULUM AND INSTRUCTION, BY CENSUS REGION

Factors	Region of the Country				Total
	Northeast	North Central	South	West	
a. Inadequate student preparation in basic skills restricts curriculum	3.21%	3.60%	3.61%	3.68%	3.56%
b. P-t instructors constrain effective instruction	2.07	2.22	2.22	2.17	2.19
c. Outdated facilities restrict curriculum/ instruction	2.87	3.32	3.14	3.69	3.24
d. Resources spent on non-instructional purposes are excessive	2.04	2.05	1.99	2.16	2.04
e. Student discipline problems restrict instruction	1.75	2.02	1.92	1.80	1.90
f. Students work and have limited time to study which constrains instruction	2.94	2.83	3.01	2.87	2.93
g. Collective bargaining of faculty restricts curriculum	2.40	2.67	2.24	2.69	2.46
h. Inadequate student preparation in science/math restricts curriculum	3.31	3.32	3.45	3.20	3.36
i. Community, faculty, or student pressures restrict course cancellations	2.09	2.34	2.32	2.65	2.35
j. Inadequate funding restricts curricula	3.35	3.69	3.58	4.15	3.67
k. Competition for students causes us to offer programs we otherwise would not offer	2.02	2.03	2.17	2.10	2.10
1. Open-entry policy restricts programs	2.12	2.07	2.12	1.93	2.08

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of respondents in Northeast is 57; North Central--98; South--161; and West--61. Level of agreement scale ranges from 1 = Strongly disagree to 5 = Strongly agree (see question 10).

TABLE A-21

FREQUENCY AND TYPE OF PROGRAM EVALUATION, BY TYPE OF INSTITUTION

Type/Frequency	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Internal Evaluations				
Percentage of institutions that evaluate programs--				
--Once a year	30.48%	68.75%	19.70%	40.27%
--Every two years	12.30	6.25	12.12	10.41
--Greater than every other year	28.88	6.25	36.36	23.29
--Only as needed	28.34	18.75	31.82	26.03
External Evaluations				
Percentage of institutions that evaluate programs--				
--Once a year	8.70%	26.79%	4.84%	13.69%
--Every two years	9.24	12.50	1.61	8.94
--Greater than every other year	49.46	48.21	53.23	49.72
--Only as needed	32.61	12.50	40.32	27.65

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of community and junior college respondents is 191; technical institutes --117; and colleges and universities--67.

TABLE A-22

FREQUENCY AND TYPE OF PROGRAM EVALUATION, BY CENSUS REGION

Type/Frequency	Region of the Country				Total
	Northeast	North Central	South	West	
Internal Evaluations					
Percentage of institutions that evaluate programs--					
--Once a year	28.30%	34.74%	52.83%	26.67%	40.27%
--Every two years	7.55	11.58	7.55	18.33	10.41
--Greater than every other year	32.08	26.32	16.98	26.67	23.29
--Only as needed	32.08	27.37	22.64	28.33	26.03
External Evaluations					
Percentage of institutions that evaluate programs--					
--Once a year	8.00%	6.38%	22.44%	6.67%	13.69%
--Every two years	8.00	8.51	10.90	5.00	8.94
--Greater than every other year	62.00	53.19	42.95	50.00	49.72
--Only as needed	22.00	31.91	23.72	38.33	27.65

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of respondents in Northeast is 57; North Central--98; South--161; and West--61.

TABLE A-23

PERCENTAGE OF INSTITUTIONS THAT RECENTLY IMPLEMENTED POLICY CHANGES, BY TYPE OF INSTITUTION

Policy Change	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Tighter admission requirements	29%	34%	61%	36%
Assessment of all incoming students	90%	85%	91%	88%
Stiffened grading standards	55%	37%	50%	48%
Retention of special need students	84%	63%	79%	76%
Merit pay	42%	32%	63%	43%
Formal recognition of good teaching	76%	70%	88%	76%
Increased hiring standards	55%	52%	74%	58%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of community and junior college respondents is 191; technical institutes --117; and colleges and universities--67.

TABLE A-24

PERCENTAGE OF INSTITUTIONS THAT RECENTLY IMPLEMENTED POLICY CHANGES, BY CENSUS REGION

Policy Change	Region of the Country				Total
	Northeast	North Central	South	West	
Tighter admission requirements	35%	44%	36%	27%	36%
Assessment of all incoming students	81%	85%	90%	95%	88%
Stiffened grading standards	43%	38%	51%	63%	48%
Retention of special need students	74%	74%	75%	85%	76%
Merit pay	35%	38%	54%	28%	43%
Formal recognition of good teaching	65%	78%	80%	75%	76%
Increased hiring standards	51%	54%	64%	55%	58%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of respondents in Northeast is 57; North Central--98; South--161; and West--61.

TABLE A-25

PERCENTAGE OF INSTITUTIONS PROVIDING FACILITIES OR INSTRUCTORS FOR EXTERNAL PROGRAMS, BY TYPE OF INSTITUTION

External Program/ Resource	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Students studying for GED				
Facilities only	12.77%	12.28%	18.33%	13.54%
Instructors only	0.53	0.00	0.00	0.28
Both	55.85	60.53	20.00	51.38
Neither	30.85	27.19	61.67	34.81
Adult noncredit classes				
Facilities only	3.72%	4.46%	3.08%	3.84%
Instructors only	1.06	0.00	6.15	1.64
Both	84.57	83.04	67.69	81.10
Neither	10.64	12.50	23.08	13.42
JTPA programs				
Facilities only	4.89%	8.04%	1.79%	5.40%
Instructors only	1.09	0.89	3.57	1.42
Both	75.54	83.93	37.50	72.16
Neither	18.48	7.14	57.14	21.02
CBO programs				
Facilities only	20.43%	13.51%	20.34%	18.26%
Instructors only	3.23	2.70	1.69	2.81
Both	52.69	53.15	38.98	50.56
Neither	23.66	30.63	38.98	28.37
Customized training				
Facilities only	3.19%	5.36%	1.59%	3.58%
Instructors only	3.72	0.89	7.94	3.58
Both	87.77	86.61	76.19	85.40
Neither	5.32	7.14	14.29	7.44
Military training				
Facilities only	4.89%	1.80%	7.81%	4.46%
Instructors only	3.80	0.90	7.81	3.62
Both	15.22	14.41	23.44	16.43
Neither	76.09	82.88	60.94	75.49
Apprenticeship programs				
Facilities only	4.92%	2.68%	0.00%	3.37%
Instructors only	4.92	3.57	3.28	4.21
Both	44.81	41.96	29.51	41.29
Neither	45.36	51.79	67.21	51.12

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of community and junior college respondents is 191; technical institutes --117; and colleges and universities--67.

TABLE A-26

PERCENTAGE OF INSTITUTIONS PROVIDING FACILITIES OR INSTRUCTORS FOR EXTERNAL PROGRAMS, BY CENSUS REGION

External Program/ Resource	Region of the Country				Total
	Northeast	North Central	South	West	
Students studying for GED					
Facilities only	11.54%	17.71%	14.56%	5.17%	13.54%
Instructors only	0.00	0.00	0.00	1.72	0.28
Both	36.54	47.92	53.80	63.79	51.38
Neither	51.92	34.38	31.65	29.31	34.81
Adult noncredit classes					
Facilities only	1.89%	3.13%	5.06%	3.33%	3.84%
Instructors only	0.00	3.13	1.90	0.00	1.64
Both	77.36	82.29	80.38	83.33	81.10
Neither	20.75	11.46	12.66	13.33	13.42
JTPA programs					
Facilities only	2.04%	5.43%	7.79%	1.72%	5.40%
Instructors only	2.04	3.26	0.00	1.72	1.42
Both	61.22	70.65	75.32	74.14	72.16
Neither	34.69	20.65	16.88	22.41	21.02
CBO programs					
Facilities only	17.65%	12.63%	20.92%	20.34%	18.26%
Instructors only	0.00	6.32	0.65	5.08	2.81
Both	58.82	57.89	44.44	47.46	50.56
Neither	23.53	23.16	33.99	27.12	28.37
Customized training					
Facilities only	0.00%	2.08%	6.41%	3.33%	3.58%
Instructors only	3.77	3.13	2.56	6.67	3.58
Both	83.02	83.33	85.90	88.33	85.40
Neither	13.21	11.46	5.13	1.67	7.44
Military training					
Facilities only	1.85%	4.17%	4.64%	6.78%	4.46%
Instructors only	5.56	3.13	2.65	5.08	3.62
Both	12.96	14.58	19.21	15.25	16.43
Neither	79.63	78.13	73.51	72.88	75.49
Apprenticeship programs					
Facilities only	1.96%	4.21%	1.96%	6.78%	3.37%
Instructors only	3.92	4.21	3.92	5.08	4.21
Both	41.18	41.05	37.25	52.54	41.29
Neither	52.94	50.53	56.86	35.59	51.12

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of respondents in Northeast is 57; North Central--98; South--161; and West--61.

TABLE A-27

PERCENTAGE OF INSTITUTIONS WITH VARIOUS EXTERNAL LINKAGES, BY TYPE OF INSTITUTION

External Linkage	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Provides teaching staff or other support for classes/programs off campus	82.70%	75.23%	50.79%	74.79%
Formally represented on a community-based econ. development activity	86.41%	76.11%	82.54%	82.50%
Formally represented on a regional voc. ed. planning committee	77.42%	77.19%	46.77%	72.10%
Formally represented on a PIC	66.49%	71.93%	28.81%	62.01%
Cooperative education programs				
--Percentage of students enrolled in programs	4.49%	7.56%	6.46%	5.80%
--Percentage of students receiving credit	4.96%	9.23%	8.42%	6.90%
Articulation agreements				
--Secondary students attend courses	77.42%	58.93%	62.50%	69.06%
--2+2/tech prep	28.57%	15.32%	6.35%	20.51%
--Students take courses at secondary school and get credit	22.04%	13.27%	20.31%	19.01%
--Students may receive postsec. credit for prior courses in secondary school	55.80%	61.82%	37.10%	54.39%
--Co-located with secondary	29.73%	26.13%	18.33%	26.69%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of community and junior college respondents is 191; technical institutes --117; and colleges and universities--67.

TABLE A-28

PERCENTAGE OF INSTITUTIONS WITH VARIOUS EXTERNAL LINKAGES, BY CENSUS REGION

External Linkage	Region of the Country				Total
	Northeast	North Central	South	West	
Provides teaching staff or other support for classes/programs off campus	74.51%	75.82%	73.25%	75.00%	74.79%
Formally represented on a community-based econ. development activity	75.93%	86.81%	83.54%	77.97%	82.50%
Formally represented on a regional voc. ed. planning committee	59.26%	82.98%	69.23%	73.33%	72.10%
Formally represented on a PIC	52.83%	65.93%	61.69%	63.93%	62.01%
Cooperative education programs					
--Percentage of students enrolled in programs	6.84%	7.67%	4.67%	4.82%	5.80%
--Percentage of students receiving credit	5.54%	8.54%	5.57%	9.05%	6.90%
Articulation agreements					
--Secondary students attend courses	55.77%	61.70%	71.52%	85.00%	69.06%
--2+2/tech prep	15.38%	14.89%	17.65%	40.68%	20.51%
--Students take courses at secondary school and get credit	11.54%	19.15%	18.87%	25.00%	19.01%
--Students may receive postsec. credit for prior courses in secondary school	42.31%	58.70%	56.58%	52.54%	54.39%
--Co-located with secondary	32.69%	27.47%	22.29%	32.76%	26.69%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of respondents in Northeast is 57; North Central--98; South--161; and West--61.

TABLE A-29

MEAN RANK ORDERING OF PRIORITY FOR ESTABLISHING LINKAGES WITH VARIOUS ORGANIZATIONS, BY TYPE OF INSTITUTION

Organization	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Organized labor	6.39	6.17	6.56	6.35
Military	6.47	6.78	5.59	6.45
Business/industry	2.16	1.74	1.96	1.99
Customized training	3.98	3.68	4.58	3.97
JTPA	4.66	4.38	5.68	4.72
Community based organizations	4.18	4.41	3.88	4.20
Other postsecondary institutions	3.79	4.76	3.33	4.03
Proprietary schools	7.34	7.31	5.89	7.05
Secondary schools	2.74	3.24	2.75	2.91

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of community and junior college respondents is 191; technical institutes--117; and colleges and universities--67.

TABLE A-30

MEAN RANK ORDERING OF PRIORITY FOR ESTABLISHING LINKAGES WITH VARIOUS ORGANIZATIONS, BY CENSUS REGION

Organization	Region of the Country				Total
	Northeast	North Central	South	West	
Organized labor	5.72	5.91	7.02	5.82	6.35
Military	6.37	7.04	6.29	6.04	6.45
Business/industry	1.91	2.15	1.90	2.08	1.99
Customized training	4.39	3.69	3.93	4.12	3.97
JTPA	5.30	4.62	4.59	4.69	4.72
Community based organizations	4.41	4.62	4.05	3.78	4.20
Other postsecondary institutions	3.65	4.07	4.21	3.82	4.03
Proprietary schools	7.21	7.18	6.90	7.10	7.05
Secondary schools	3.02	3.01	2.88	2.75	2.91

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of respondents in Northeast is 57; North Central--98; South--161; and West--61.

TABLE A-31

CHARACTERISTICS OF ADMINISTRATORS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Average age	49.79	50.77	50.20	50.15
Percentage female	14.59%	12.07%	12.50%	13.42%
Race--				
--Percentage black	3.26%	4.35%	1.56%	3.31%
--Percentage white	92.39	92.17	95.31	92.84
Highest education level--				
--Masters	7.33%	11.11%	1.49%	7.47%
--Masters plus graduate work	18.32	47.01	10.45	25.87
--Ph.D.	63.87	26.50	79.10	54.93
Mean months in job	215.15	161.14	254.42	207.02
Salary Mean	$36,789	$34,108	$36.132	$35,719

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of community and junior college respondents is 191; technical institutes--117; and colleges and universities--67.

TABLE A-32

CHARACTERISTICS OF ADMINISTRATORS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Average age	48.80	50.94	49.97	50.55	50.15
Percentage female	14.81%	10.75%	13.75%	16.67%	13.42%
Race--					
--Percentage black	0.00%	3.26%	5.03%	1.67%	3.31%
--Percentage white	96.30	91.30	92.45	93.33	92.84
Highest education level--					
--Masters	5.26%	6.19%	9.94%	4.84%	7.47%
--Masters plus graduate work	22.81	26.80	26.71	25.81	25.87
--Ph.D.	52.63	57.73	53.42	56.45	54.93
Mean months in job	287.74	154.45	203.89	223.18	207.02
Salary mean	$30,531	$41,279	$34,138	$35,895	$35,719

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project administrator survey. Sample size is 377. Number of respondents in Northeast is 57; North Central--98; South--161; and West--61.

TABLE A-33

COMMUNITY CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Type of Area--				
--Percentage rural	48.84%	52.38%	43.86%	49.10%
--Percentage suburban	31.98	26.67	19.30	28.14
--Percentage urban	19.19	20.95	36.84	22.75
Average Population (in 000's)	414.65	229.70	1,478.92	527.72
Ethnicity--				
--Percentage Native American	2.88%	1.13%	0.90%	2.01%
--Percentage Asian	1.84	0.99	2.98	1.78
--Percentage Black	8.55	13.79	8.34	10.14
--Percentage Hispanic	5.69	1.97	3.93	4.28
--Percentage White	72.48	77.95	73.58	74.32
--Percentage Other	0.97	1.57	0.34	1.04
Percentage of Population that is econ. disad.	19.55%	24.88%	15.69%	20.50%

NOTE: Data are from the Postsecondary Occupational Education Delivery: An Examination administrator official survey supplement. Completed sample size is 342. Sample size for community and junior colleges is 176; technical institutes--105; and colleges and universities--59.

TABLE A-34

COMMUNITY CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Type of Area--					
--Percentage rural	28.85%	58.14%	51.41%	47.27%	49.10%
--Percentage suburban	44.23	18.60	26.76	30.91	28.14
--Percentage urban	26.92	23.26	21.83	21.82	22.75
Average Population (in 000's)	1,524.98	339.25	328.91	396.62	527.72
Ethnicity--					
--Percentage Native Amer.	0.50%	2.19%	1.05%	5.75%	2.01%
--Percentage Asian	0.98	0.84	0.86	6.49	1.78
--Percentage Black	6.98	5.38	16.90	3.38	10.14
--Percentage Hispanic	3.19	1.75	4.13	9.89	4.28
--Percentage White	72.19	86.18	70.83	66.11	74.32
--Percentage Other	0.52	0.51	1.59	1.00	1.04
Percentage of Pop. that is econ. disad.	14.46%	18.18%	24.05%	20.78%	20.50%

NOTE: Data are from the Postsecondary Occupational Education Delivery: An Examination administrator official survey supplement. Completed sample size is 342. Sample size for Northeast region is 54; North Central--88; South--144; and West--55.

TABLE A-35

INSTITUTIONAL CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Mean enrollment--				
--Occupational progs--f-t	594.48	647.29	377.27	572.23
--Occupational progs--p-t	1,104.63	1,551.07	131.20	1,067.44
--Transfer/gen. progs--f-t	659.89	25.86	964.59	513.94
--Transfer/gen. progs--p-t	1,325.41	17.24	386.85	754.11
Admission requirements--				
--Percentage with none	11.66%	39.18%	3.51%	18.61%
--Percentage with open door	41.10	20.62	8.77	29.02

NOTE: Data are from the Postsecondary Occupational Education Delivery: An Examination administrator official survey supplement. Completed sample size is 342. Sample size for community and junior colleges is 176; technical institutes--105; and colleges and universities--59.

TABLE A-36

INSTITUTIONAL CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Mean enrollment--					
--Occupational progs--f-t	601.98	645.15	509.65	592.40	572.23
--Occupational progs--p-t	610.30	1,458.66	910.76	1,319.56	1,067.44
--Transfer/gen. progs--f-t	516.70	308.26	475.91	949.22	513.94
--Transfer/gen. progs--p-t	491.78	635.19	556.72	1,732.47	754.11
Admission requirements--					
--Percentage with none	14.81%	14.10%	19.55%	26.42%	18.61%
--Percentage with open door	20.37	34.62	27.82	32.08	29.02

NOTE: Data are from the Postsecondary Occupational Education Delivery: An Examination administrator official survey supplement. Completed sample size is 342. Sample size for Northeast region is 54; North Central--88; South--144; and West--55.

TABLE A-37

STUDENT CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Gender--				
--Percentage female	54.93%	46.16%	52.47%	51.71%
--Percentage male	42.24	53.81	47.53	46.82
Ethnicity/race				
--Percentage Native Amer.	2.49%	0.94%	1.00%	1.75%
--Percentage Asian	2.26	1.05	2.85	1.99
--Percentage Black	9.61	12.82	8.22	10.35
--Percentage Hispanic	4.72	1.47	3.44	3.53
--Percentage White	75.67	81.40	83.02	78.71
--Percentage Other	1.83	1.37	1.58	1.65
Percentage handicapped	2.64%	5.12%	3.46%	3.57%
Percentage LEP	5.81%	1.80%	3.10%	4.09%
Family income--				
--Percentage >25K	14.90%	9.89%	23.20%	14.99%
--Percentage 15-25K	17.27	21.97	14.19	18.17
--Percentage 10-15K	11.29	20.51	6.64	13.32
--Percentage <10K	12.07	21.23	10.00	14.60
Percentage noncompleters	39.55%	26.49%	36.97%	35.07%
Percentage single parents	7.73%	14.41%	4.63%	9.26%

NOTE: Data are from the Postsecondary Occupational Education Delivery: An Examination administrator official survey supplement. Completed sample size is 342. Sample size for community and junior colleges is 176; technical institutes--105; and colleges and universities--59.

TABLE A-38

STUDENT CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Gender--					
--Percentage female	54.81%	49.86%	51.78%	52.02%	51.71%
--Percentage male	45.11	50.22	46.10	44.35	46.82
Ethnicity/race					
--Percentage Native Amer.	0.41%	2.25%	0.58%	5.33%	1.75%
--Percentage Asian	1.11	1.09	0.94	7.04	1.99
--Percentage Black	7.81	6.02	16.41	4.05	10.35
--Percentage Hispanic	2.74	1.31	3.38	8.35	3.53
--Percentage White	83.65	88.36	76.07	64.95	78.71
--Percentage Other	2.33	1.14	1.25	2.87	1.65
Percentage handicapped	4.57%	3.35%	3.35%	3.33%	3.57%
Percentage LEP	3.44%	2.82%	2.97%	9.76%	4.09%
Family income--					
--Percentage >25K	22.33%	14.98%	13.93%	10.53%	14.99%
--Percentage 15-25K	18.94	21.06	17.64	14.13	18.17
--Percentage 10-15K	11.59	13.03	16.00	8.40	13.32
--Percentage <10K	11.22	16.23	15.25	13.04	14.60
Percentage noncompleters	27.96%	26.59%	39.02%	45.35%	35.07%
Percentage single parents	7.09%	9.88%	9.86%	8.65%	9.26%

NOTE: Data are from the Postsecondary Occupational Education Delivery: An Examination administrator official survey supplement. Completed sample size is 342. Sample size for Northeast region is 54; North Central--88; South-- 144; and West--55.

TABLE A-39

HANDICAPPED AND LEP STUDENT CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
	HANDICAPPED STUDENTS			
Type of Handicap--				
--Percentage physically handicapped	32.31%	29.09%	44.92%	33.73%
--Percentage learning disabled	17.17	35.17	18.15	22.80
--Percentage both phys. hand. and learn. disabled	6.20	6.86	2.75	5.87
--Percentage emotionally/ soc. impaired	6.71	10.26	1.93	6.96
Percentage enrolled in developmental education	32.02%	29.64%	21.66%	29.42%
Major programs--				
--Percentage occupational	41.07%	82.90%	35.15%	53.24%
--Percentage trans./general	30.49	4.50	26.98	21.73
	LIMITED ENGLISH PROFICIENT STUDENTS (LEP)			
Percentage classified with formal test	62.40%	36.36%	77.42%	56.76%
Percentage enrolled in developmental education	43.28%	22.47%	20.42%	32.99%
Major programs--				
--Percentage occupational	33.45%	44.10%	11.90%	33.39%
--Percentage trans./general	23.49	3.24	19.07	16.37

NOTE: Data are from the Postsecondary Occupational Education Delivery: An Examination administrator official survey supplement. Completed sample size is 342. Sample size for community and junior colleges is 176; technical institutes--105; and colleges and universities--59.

TABLE A-40

HANDICAPPED AND LEP STUDENT CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
	HANDICAPPED STUDENTS				
Type of Handicap--					
--Percentage physically handicapped	36.89%	28.94%	36.47%	30.91%	33.73%
--Percentage learning disabled	23.61	25.23	21.47	21.82	22.80
--Percentage both phys. hand. and learn. disabled	3.39	8.10	5.49	5.22	5.87
--Percentage emotionally/ soc. impaired	8.63	6.56	6.51	7.11	6.96
Percentage enrolled in developmental education	31.56%	25.82%	29.67%	32.33%	29.42%
Major programs--					
--Percentage occupational	57.00%	56.69%	55.29%	37.80%	53.24%
--Percentage trans./general	23.93	17.72	20.78	28.87	21.73
	LIMITED ENGLISH PROFICIENT STUDENTS (LEP)				
Percentage classified with formal test	68.29%	52.73%	53.01%	59.09%	56.76%
Percentage enrolled in developmental education	42.98%	28.99%	29.51%	37.45%	32.99%
Major programs--					
--Percentage occupational	37.98%	34.57%	30.83%	32.49%	33.39%
--Percentage trans./general	17.13	16.56	13.72	22.58	16.37

NOTE: Data are from the Postsecondary Occupational Education Delivery: An Examination administrator official survey supplement. Completed sample size is 342. Sample size for Northeast region is 54; North Central--88; South-- 144; and West--55.

TABLE A-41

MEAN OPERATING BUDGET CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Total Budget	$10,802,044	$3,497,986	$15,944,495	$9,398,805
Source of funds--				
--Community/ county	15.16%	13.33%	1.83%	12.27%
--State	47.55	51.39	33.83	46.23
--Federal	3.95	8.49	5.39	5.59
--Tuition	17.31	14.17	36.78	19.67
--Donations/gifts	0.92	1.66	5.20	1.88
--Other	4.43	1.73	10.12	4.85
Uses of funds--				
--Instruction	46.71%	51.56%	38.05%	46.75%
--Administration	11.81	11.62	13.10	11.99
--Student srvs.	9.15	6.78	8.64	8.35
--Equipment	3.24	5.26	2.93	3.83
--Facilities	7.27	7.86	9.78	7.91
--Other	6.91	4.59	12.66	7.15

NOTE: Data are from the Postsecondary Occupational Education Delivery: An Examination administrator official survey supplement. Completed sample size is 342. Sample size for community and junior colleges is 176; technical institutes--105; and colleges and universities--59.

TABLE A-42

MEAN OPERATING BUDGET CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Total Budget	$12,544,793	$9,813,801	$7,354,663	$11,110,661	$9,398,805
Source of funds--					
--Community/ county	19.09%	12.60%	7.91%	16.31%	12.27%
--State	27.93	40.80	52.90	55.35	46.23
--Federal	5.22	5.33	6.56	3.80	5.59
--Tuition	34.72	26.11	14.49	8.11	19.67
--Donations/gifts	1.41	1.20	2.78	1.11	1.88
--Other	6.04	4.88	4.75	3.96	4.85
Uses of funds--					
--Instruction	42.56%	49.56%	47.60%	43.76%	46.75%
--Administration	13.83	9.31	12.77	12.49	11.99
--Student srvs.	9.50	7.80	8.09	8.80	8.35
--Equipment	2.96	3.82	4.40	3.27	3.83
--Facilities	7.39	8.33	7.56	8.55	7.91
--Other	11.37	6.57	6.56	5.60	7.15

NOTE: Data are from the Postsecondary Occupational Education Delivery: An Examination administrator official survey supplement. Completed sample size is 342. Sample size for Northeast region is 54; North Central--88; South-- 144; and West--55.

TABLE A-43

CAREER GUIDANCE GOALS AND CHARACTERISTICS, BY TYPE OF INSTITUTION

Goals/Characteristics	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Mean rank ordering of of following goals:				
--Help students prepare for addn'l schooling	3.62	4.67	4.01	4.03
--Help students with personal growth/dev.	3.32	3.39	2.97	3.26
--Help students plan and prepare for careers	2.37	2.59	1.65	2.31
--Help place students in training-related employment	2.70	1.88	2.19	2.36
--Help students select and schedule courses	3.82	3.82	4.96	4.04
--Help special and at-risk groups of students	4.76	4.37	5.02	4.67
Percentage of institutions offering career information in a language other than English	17.71%	11.01%	8.22%	13.72%
Percentage of institutions in which placement staff administer occupational aptitude tests	94.25%	81.48%	87.67%	89.02%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination placement director survey. Completed sample size is 367. Sample size for community and junior colleges is 175; technical institutes--110; and colleges and universities--73.

TABLE A-44

CAREER GUIDANCE GOALS AND CHARACTERISTICS, BY CENSUS REGION

Goals/Characteristics	Region of the Country				Total
	Northeast	North Central	South	West	
Mean rank ordering of of following goals					
--Help students prepare for addn'l schooling	3.88	4.02	4.28	3.48	4.03
--Help students with personal growth/dev.	3.03	3.34	3.20	3.57	3.26
--Help students plan and prepare for careers	1.79	2.19	2.49	2.56	2.31
--Help place students in training-related employment	2.21	2.15	2.36	2.86	2.36
--Help students select and schedule courses	4.62	4.28	3.73	3.92	4.04
--Help special and at-risk groups of students	4.71	4.85	4.68	4.31	4.67
Percentage of institutions offering career information in a language other than English	9.52%	13.48%	10.19%	13.72%	13.72%
Percentage of institutions in which placement staff administer occupational aptitude tests	80.96%	86.36%	91.02%	92.98%	89.02%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination placement director survey. Completed sample size is 367. Sample size for the Northeast region is 63; North Central--90; South--157; and West--57.

TABLE A-45

PERCENTAGE OF STUDENTS THAT PARTICIPATE IN VARIOUS PLACEMENT ACTIVITIES, BY TYPE OF INSTITUTION

Activity	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Exploratory work experience	15.59%	19.71%	32.75%	20.14%
Career day/night	15.39%	22.27%	20.38%	18.50%
Job site tours	11.91%	48.37%	17.46%	23.98%
Visits to other post-secondary institutions	9.20%	7.36%	5.78%	7.77%
Job shadowing	2.45%	6.56%	6.08%	4.35%
Career aptitude/interest tests	26.01%	42.24%	23.01%	30.19%
Individual counseling	43.36%	55.07%	41.51%	46.40%
Group counseling	23.03%	33.34%	20.25%	25.46%
Training in job seeking	27.53%	78.59%	39.40%	45.23%
Training in resume writing	27.63%	70.49%	41.64%	43.04%
Computerized career info. resources	16.35%	22.07%	11.27%	16.96%
Noncomputerized career info. resources	25.98%	43.72%	31.97%	32.19%
No contact with placement office	33.64%	17.02%	26.32%	27.29%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination placement director survey. Completed sample size is 367. Sample size for community and junior colleges is 175; technical institutes--110; and colleges and universities--73.

TABLE A-46

PERCENTAGE OF STUDENTS THAT PARTICIPATE IN VARIOUS PLACEMENT ACTIVITIES, BY CENSUS REGION

Activity	Region of the Country				Total
	Northeast	North Central	South	West	
Exploratory work experience	24.95%	23.39%	18.92%	13.05%	20.14%
Career day/night	19.25%	16.74%	21.18%	13.05%	18.50%
Job site tours	21.62%	32.63%	22.89%	15.91%	23.98%
Visits to other post-secondary institutions	9.38%	8.17%	6.90%	7.79%	7.77%
Job shadowing	3.25%	5.23%	4.76%	3.05%	4.35%
Career aptitude/interest tests	20.00%	30.48%	35.28%	27.00%	30.19%
Individual counseling	46.22%	41.83%	50.28%	43.09%	46.40%
Group counseling	29.78%	23.80%	26.20%	21.32%	25.46%
Training in job seeking	43.19%	53.53%	46.21%	31.67%	45.23%
Training in resume writing	44.16%	52.82%	41.55%	30.44%	43.04%
Computerized career info. resources	11.24%	16.89%	18.85%	18.18%	16.96%
Noncomputerized career info. resources	33.08%	33.00%	32.39%	29.40%	32.19%
No contact with placement office	25.11%	27.08%	24.79%	36.93%	27.29%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination placement director survey. Completed sample size is 367. Sample size for the Northeast region is 63; North Central--90; South--157; and West--57.

TABLE A-47

PLACEMENT OFFICE CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Staffing				
Mean no. of f-t prof. staff	1.87	2.14	1.62	1.88
Mean no. of half-time prof. staff	0.45	0.27	0.41	0.39
Mean no. of less than half-time staff	0.70	0.59	0.47	0.61
Percentage of institutions where student waiting time is--				
--No wait	58.90%	57.28%	41.67%	54.73%
--A few minutes to one hour	25.15	37.86	30.56	30.18
--Greater than one hour	15.96	4.85	27.78	15.08
Percentage of institutions where office gets involved in curricular decision making--				
--Never happens	16.67%	13.89%	26.76%	17.87%
--Occurred on a few occasions	32.14	33.33	36.62	33.43
--Occurred several times	27.38	23.15	18.31	24.21
--Occurs regularly	23.81	29.63	18.31	24.50

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination placement director survey. Completed sample size is 367. Sample size for community and junior colleges is 175; technical institutes--110; and colleges and universities--73.

TABLE A-48

PLACEMENT OFFICE CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Staffing					
Mean no. of f-t prof. staff	2.32	1.33	1.99	1.95	1.88
Mean no. of half-time prof. staff	0.46	0.36	0.36	0.44	0.39
Mean no. of less than half-time staff	0.22	0.56	0.94	0.23	0.61
Percentage of institutions where student waiting time is--					
--No wait	49.15%	48.84%	60.54%	53.70%	54.73%
--A few minutes to one hour	25.42	30.23	31.97	31.48	30.18
--Greater than one hour	15.42	20.94	7.48	14.81	15.08
Percentage of institutions where office gets involved in curricular decision making--					
--Never happens	13.56%	16.28%	21.71%	19.64%	17.87%
--Occurred on a few occasions	30.51	40.70	30.26	33.93	33.43
--Occurred several times	28.81	20.93	22.37	26.79	23.80
--Occurs regularly	27.12	22.09	25.66	19.64	24.08

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination placement director survey. Completed sample size is 367. Sample size for the Northeast region is 63; North Central--90; South--157; and West--57.

TABLE A-49

MEAN INVOLVEMENT RATING OF PLACEMENT OFFICE STAFF IN VARIOUS ACTIVITIES, BY TYPE OF INSTITUTION

Activity	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Administrative duties not related to placement	3.17	3.36	3.25	3.24
Teaching employability skills	3.11	2.87	3.05	3.02
Teaching classes (nonguidance related)	1.97	1.61	1.96	1.87
Administering tests	2.74	2.93	2.66	2.79
Updating, maintaining records	3.26	3.58	3.37	3.38
Individual counseling	3.73	3.79	3.84	3.77
Confering with instructors about placement office	3.39	3.69	3.56	3.52
Directing extracurricular activities	2.16	2.24	2.36	2.22
Directing career guidance activities	3.11	3.07	3.34	3.15
Developing contacts with business	3.48	3.61	3.68	3.56
Meeting recruiters from postsec. schools or military	3.06	3.09	3.18	3.09
Working with JTPA	2.96	3.58	2.39	3.03

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination placement director survey. Completed sample size is 367. Sample size for community and junior colleges is 175; technical institutes--110; and colleges and universities--73. Involvement scale ranges from 1 = Never to 4 = Routinely. (see question 7)

TABLE A-50

MEAN INVOLVEMENT RATING OF PLACEMENT OFFICE STAFF IN VARIOUS ACTIVITIES, BY CENSUS REGION

Decision/Action	Region of the Country				Total
	Northeast	North Central	South	West	
Administrative duties not related to placement	3.19	3.19	3.29	3.25	3.24
Teaching employability skills	3.21	2.94	2.84	3.42	3.02
Teaching classes (nonguidance related)	1.76	1.64	2.00	2.00	1.87
Administering tests	2.65	2.57	2.99	2.76	2.79
Updating, maintaining records	3.29	3.28	3.44	3.47	3.38
Individual counseling	3.74	3.76	3.80	3.75	3.77
Confering with instructors about placement office	3.50	3.45	3.51	3.65	3.52
Directing extracurricular activities	2.23	2.14	2.31	2.11	2.22
Directing career guidance activities	3.24	3.02	3.15	3.24	3.15
Developing contacts with business	3.71	3.48	3.51	3.64	3.56
Meeting recruiters from postsec. schools or military	3.13	3.02	3.18	2.95	3.09
Working with JTPA	2.65	3.10	3.16	2.96	3.03

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination placement director survey. Completed sample size is 367. Sample size for the Northeast region is 63; North Central--90; South--157; and West--57. Involvement scale ranges from 1 = Never to 4 = Routinely. (see question 7)

TABLE A-51

PERCENTAGE OF INSTITUTIONS WITH PARTICULAR SOURCES OF INFORMATION ABOUT JOB OPPORTUNITIES, BY PART-TIME STATUS OF JOB AND BY TYPE OF INSTITUTION

Information source/ Part-time or Full-time	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Employment service listings				
--Part-time	64.74%	65.45%	71.23%	66.29%
--Full-time	75.72%	85.45%	90.41%	81.74%
Local newspaper ads				
--Part-time	52.60%	56.36%	43.84%	51.97%
--Full-time	52.02%	60.00%	50.68%	54.21%
Employer call-ins				
--Part-time	93.06%	85.45%	91.78%	90.45%
--Full-time	95.95%	97.27%	93.15%	95.79%
Training programs				
--Part-time	61.27%	60.91%	47.95%	58.43%
--Full-time	65.32%	80.00%	57.53%	68.26%
Local government listings				
--Part-time	77.46%	70.00%	71.23%	73.88%
--Full-time	87.28%	86.36%	94.52%	88.48%
Former students				
--Part-time	57.80%	52.73%	67.12%	58.15%
--Full-time	60.12%	76.36%	78.08%	68.87%
No job information				
--Part-time	2.91%	1.82%	2.74%	2.54%
--Full-time	2.33%	2.73%	4.11%	2.82%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination placement director survey. Completed sample size is 367. Sample size for community and junior colleges is 175; technical institutes--110; and colleges and universities--73.

TABLE A-52

PERCENTAGE OF INSTITUTIONS WITH PARTICULAR SOURCES OF INFORMATION ABOUT JOB OPPORTUNITIES, BY PART-TIME STATUS OF JOB AND BY CENSUS REGION

Information source/ Part-time or Full-time	Region of the Country				Total
	Northeast	North Central	South	West	
Employment service listings					
--Part-time	36.51%	40.45%	31.61%	24.56%	33.52%
--Full-time	76.19%	80.90%	86.45%	77.19%	81.87%
Local newspaper ads					
--Part-time	39.68%	51.69%	53.55%	56.15%	51.10%
--Full-time	44.44%	58.43%	52.26%	29.65%	53.57%
Employer call-ins					
--Part-time	93.65%	84.27%	90.32%	98.25%	90.66%
--Full-time	100.00%	98.88%	92.26%	96.49%	95.88%
Training programs					
--Part-time	49.21%	51.69%	59.35%	75.44%	58.24%
--Full-time	61.90%	73.03%	63.87%	78.95%	68.13%
Local government listings					
--Part-time	71.43%	73.03%	71.61%	84.21%	73.90%
--Full-time	88.89%	87.64%	87.10%	92.98%	88.46%
Former students					
--Part-time	61.90%	51.69%	56.13%	64.91%	57.42%
--Full-time	74.60%	65.17%	65.81%	71.93%	68.13%
No job information					
--Part-time	1.59%	1.14%	3.23%	3.51%	2.48%
--Full-time	3.17%	1.14%	2.58%	5.26%	2.75%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination placement director survey. Completed sample size is 367. Sample size for the Northeast region is 63; North Central--90; South--157; and West--57.

TABLE A-53

PLACEMENT AND JOB DEVELOPMENT CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Frequency of employer requests for referrals				
--None	0.59%	0.93%	0.00%	0.57%
--One-five/year	5.92	0.00	2.78	3.44
--Six to ten/year	7.10	4.63	5.56	6.02
--11 to 20/year	14.20	13.89	9.72	13.18
--21 to 50/year	11.83	23.15	18.06	16.62
--51+/year	60.36	57.41	63.89	60.17
Percentage of employer requests initiated by institution	40.86%	47.63%	47.99%	43.34%
Percentage of institutions that make follow-up contacts with employers	77.06%	89.09%	64.79%	78.35%
Percentage of institutions that report following job development strategies as effective--				
--Telephone	32.57%	17.27%	23.29%	25.98%
--In person visits	29.14%	11.82%	12.33%	20.39%
--Community organizations	54.29%	50.00%	50.68%	52.23%
--Cooperative/ internships	43.43%	41.82%	41.10%	42.46%
--Instructor referrals	40.00%	14.55%	32.88%	30.73%
--Government agencies	62.29%	46.36%	58.90%	56.70%
Percentage of institutions that do not engage in job development	10.86%	1.82%	6.85%	7.26%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination placement director survey. Completed sample size is 367. Sample size for community and junior colleges is 175; technical institutes--110; and colleges and universities--73.

TABLE A-54

PLACEMENT AND JOB DEVELOPMENT CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Frequency of employer requests for referrels					
--None	0.00%	0.00%	1.31%	1.85%	0.84%
--One five/year	1.59	3.41	4.58	1.85	3.35
--Six to ten/year	3.17	6.82	6.54	5.56	5.87
--11 to 20/year	6.35	11.36	15.69	14.81	12.85
--21 to 50/year	14.29	14.77	20.26	12.96	16.76
--51+/year	74.60	63.64	51.63	62.96	60.34
Percentage of employer requests initiated by institution	46.62%	41.63%	44.70%	41.86%	43.84%
Percentage of institutions that make follow-up contacts with employers	68.25%	79.31%	81.82%	76.36%	77.99%
Percentage of institutions that report following job development strategies as effective--					
--Telephone	14.29%	32.22%	25.48%	33.33%	26.43%
--In person visits	20.63%	20.00%	17.83%	29.82%	20.71%
--Community organizations	53.97%	48.89%	52.23%	56.14%	52.32%
--Cooperative/ internships	39.68%	43.33%	45.22%	38.60%	42.78%
--Instructor referrals	36.51%	27.78%	29.30%	38.60%	31.61%
--Government agencies	73.02%	52.22%	54.14%	54.39%	56.95%
Percentage of institutions that do not engage in job development	3.17%	8.89%	7.01%	10.53%	7.36%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination placement director survey. Completed sample size is 367. Sample size for the Northeast region is 63; North Central--90; South--157; and West--57.

TABLE A-55

STUDENT OUTCOMES AND PLACEMENT RATES, BY COMPLETER STATUS AND BY INSTITUTION TYPE

Outcomes	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Enter the military				
--Noncompleters	2.22%	3.95%	4.25%	3.14%
--Completers	1.88%	3.55%	3.73%	2.72%
Enroll in a 4-year college or univer.				
--Noncompleters	9.94%	3.23%	14.11%	8.78%
--Completers	25.75%	6.40%	14.99%	17.61%
Enroll in 2-year college or technical school				
--Noncompleters	4.26%	4.98%	4.90%	4.60%
--Completers	4.63%	6.65%	1.55%	4.61%
Enter the labor force full-time				
--Noncompleters	30.13%	46.76%	22.96%	33.55%
--Completers	46.49%	75.83%	53.05%	56.35%
Other				
--Noncompleters	4.83%	8.95%	4.27%	5.91%
--Completers	3.68%	3.86%	4.77%	3.97%
Training-related placement rate				
--Less than 10%	1.35%	0.00%	0.00%	0.63%
--10-25%	4.05	0.95	0.00	2.22
--25-50%	10.81	7.62	11.29	9.84
--50-75%	30.41	20.95	27.42	26.67
--75-90%	36.49	43.81	45.16	40.63
--90-99%	16.22	23.81	14.52	18.41
--100%	0.68	2.86	1.61	1.59

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination placement director survey. Completed sample size is 367. Sample size for community and junior colleges is 175; technical institutes--110; and colleges and universities--73.

TABLE A-56

STUDENT OUTCOMES AND PLACEMENT RATES, BY COMPLETER STATUS AND BY CENSUS REGION

Outcomes	Region of the Country				Total
	Northeast	North Central	South	West	
Enter the military					
--Noncompleters	2.51%	2.26%	4.13%	2.49%	3.14%
--Completers	2.98%	1.93%	3.08%	2.68%	2.72%
Enroll in a 4-year college or univer.					
--Noncompleters	7.32%	10.47%	9.16%	6.70%	8.78%
--Completers	21.76%	16.47%	17.73%	14.51%	17.61%
Enroll in 2-year college or technical school					
--Noncompleters	3.68%	3.92%	4.89%	5.91%	4.60%
--Completers	2.75%	4.57%	4.75%	6.37%	4.61%
Enter the labor force full-time					
--Noncompleters	25.46%	31.92%	40.78%	25.12%	33.55%
--Completers	59.43%	61.12%	57.58%	42.02%	56.35%
Other					
--Noncompleters	1.68%	6.43%	6.95%	6.88%	5.91%
--Completers	3.29%	3.38%	4.32%	4.68%	3.97%
Training-related placement rate					
--Less than 10%	0.00%	0.00%	1.44%	0.00%	0.63%
--10-25%	1.75	1.27	2.88	2.22	2.19
--25-50%	3.51	8.86	8.63	24.44	10.00
--50-75%	22.81	22.78	28.78	31.11	26.56
--75-90%	35.09	43.04	43.17	35.56	40.63
--90-99%	35.09	22.78	12.95	6.67	18.44
--100%	1.75	1.27	2.16	0.00	1.56

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination placement director survey. Completed sample size is 367. Sample size for the Northeast region is 63; North Central--90; South--157; and West--57.

TABLE A-57

PLACEMENT DIRECTOR CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Mean years of experience in placement	6.16	6.52	6.94	6.43
Percentage with highest education equal to or greater than Master's	77.18%	65.75%	79.45%	74.15%
Percentage with degree in guidance/counseling	53.53%	41.67%	41.67%	47.43%
Prior position--				
--Staff member of this office	4.71%	5.56%	13.89%	6.86%
--Staff member of institution (non-instructional)	20.59	16.67	22.22	19.71
--Instructor	13.53	16.67	13.89	14.57
--Staff of another institution	34.71	31.48	26.39	32.00
--Business/industry	10.59	15.74	9.72	12.00
Percentage on community economic development activity	57.74%	56.48%	47.89%	55.33%
Mean age	43.63	45.92	43.51	44.26
Gender				
--Female	44.71%	34.58%	56.94%	44.13%
--Male	55.29	65.42	43.06	55.87
Ethnicity				
--Black	8.33%	8.41%	8.33%	8.36%
--White	86.31	91.59	90.28	88.76
--Other	5.37	0.00	1.39	2.88

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project director survey. Completed sample size is 367. Sample size for community and junior colleges is 175; technical institutes--110; and colleges and universities--73.

TABLE A-58

PLACEMENT DIRECTOR CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Mean years of experience in placement	6.37	6.82	46.58	5.50	6.43
Percentage with highest education equal to or greater than Master's	73.01%	67.78%	77.93%	72.22%	73.69%
Percentage with degree in guidance/counseling	49.21%	45.56%	49.02%	45.28%	47.63%
Prior position--					
--Staff member of this office	6.45%	11.11%	5.19%	7.55%	7.24%
--Staff member of institution (non-instructional)	22.58	20.00	18.18	20.75	19.78
--Instructor	9.68	13.33	18.18	11.32	14.48
--Staff of another institution	41.94	28.89	32.47	24.53	32.03
--Business/industry	4.84	13.33	14.29	11.32	11.98
Percentage on community economic development activity	47.62%	52.33%	55.19%	66.04%	54.78%
Mean age	41.82	46.67	43.96	43.88	44.26
Gender					
--Female	54.10%	34.83%	45.45%	46.30%	44.41%
--Male	45.90	65.17	54.55	53.70	55.59
Ethnicity					
--Black	3.45%	6.82%	12.34%	3.70%	8.19%
--White	93.10	90.91	85.71	88.89	88.70
--Other	3.44	2.28	1.95	7.40	3.10

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project director survey. Completed sample size is 367. Sample size for the Northeast region is 63; North Central--90; South--157; and West--57.

TABLE A-59

PROGRAM RESOURCE CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Mean enrollment in program (FTEs)	159.84	85.80	136.27	134.69
Mean instructional staff (FTEs)	8.36	5.92	7.23	7.49
Mean number of permanent, full-time instructors	4.67	4.60	5.26	4.76
Mean program budget	$155,744	$90,616	$143,702	$135,976
Mean Perkins funding	$4,999	$4,495	$2,915	$4,460
Mean JTPA funding	$2,001	$2,732	$ 0	$1,811

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for community and junior colleges is 326; technical institutes--162; and colleges and universities--117.

TABLE A-60

PROGRAM RESOURCE CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Mean enrollment in program (FTEs)	97.02	124.12	121.95	223.28	134.69
Mean instructional staff (FTEs)	6.56	7.34	7.34	9.01	7.49
Mean number of permanent, full-time instructors	4.25	4.56	4.91	5.28	4.76
Mean program budget	$88,438	$158,901	$116,244	$196,345	$135,977
Mean Perkins funding	$ 1,054	$ 4,474	$ 5,565	$ 5,313	$ 4,460
Mean JTPA funding	$ 183	$ 2.145	$ 2,194	$ 2,059	$ 1,812

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for the Northeast region is 104; North Central region--158; South--242; and West--101.

TABLE A-61

PROGRAM ADVISORY BOARD CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Percentage of programs with advisory board	84.95%	94.97%	55.17%	81.82%
Mean membership (if there is a board)	12.01	10.35	10.46	11.29
Meeting frequency				
--Once/month	1.50%	0.68%	0.00%	1.05%
--Not as often as once/ month but on regular basis	41.35	52.70	39.68	44.65
--Once/year	43.98	37.16	41.27	41.51
--Only as needed	13.16	9.46	19.05	12.79
Mean B/I members	9.96	8.94	7.64	9.34
Mean organized labor members	0.88	1.16	1.00	0.98

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for community and junior colleges is 326; technical institutes--162; and colleges and universities--117.

TABLE A-62

PROGRAM ADVISORY BOARD CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Percentage of programs with advisory board	74.04%	83.12%	80.17%	91.92%	81.82%
Mean membership (if there is a board)	9.65	13.87	10.14	11.43	11.29
Meeting frequency					
--Once/month	0.00%	0.00%	0.53%	4.49%	1.05%
--Not as often as once/month but on regular basis	38.67	42.86	45.45	50.56	44.65
--Once/year	44.00	44.44	39.57	39.33	41.51
--Only as needed	17.33	12.70	14.44	5.62	12.79
Mean B/I members	7.69	10.94	8.94	9.33	9.34
Mean organized labor members	0.87	1.55	0.68	0.91	0.98

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for the Northeast region is 104; North Central region--158; South--242; and West--101.

TABLE A-63

PROGRAM CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Type of degree awarded by program--				
--Vocational cert.	7.79%	60.49%	4.31%	21.37%
--Assoc. degree	51.09	20.37	41.38	40.90
--Both voc. cert. & assoc.	38.94	3.70	9.48	23.71
--Other	2.18	13.58	44.82	13.53
Mean number of courses comprising program--				
--quarter system	23.38	21.32	28.23	23.43
--semester system	18.35	13.52	22.14	18.87
Mean no. of students awarded degree/certificate in 1985-86	29.40	25.32	29.24	28.27
Student completion rates--				
--complete the program in minimal time	39.37%	52.70%	48.63%	44.73%
--complete, but take longer	20.56	13.67	19.56	18.52
--leave at program's initiative	10.23	8.74	10.51	9.88
--leave for other reasons	21.79	19.99	16.20	20.23

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for community and junior colleges is 326; technical institutes--162; and colleges and universities--117.

TABLE A-64

PROGRAM CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Type of degree awarded by program--					
--Vocational cert.	15.38%	24.52%	23.75%	17.00%	21.37%
--Assoc. degree	56.73	46.45	39.17	20.00	40.90
--Both voc. cert. & assoc.	12.50	18.06	17.08	60.00	23.71
--Other	15.38	10.98	18.75	3.00	13.53
Mean number of courses comprising program--					
--quarter system	19.20	25.20	23.50	19.96	23.43
--semester system	20.27	18.16	20.43	14.98	18.87
Mean no. of students awarded degree/certificate in 1985-86	28.83	28.42	25.80	33.25	28.27
Student completion rates--					
--complete the program in minimal time	50.98%	49.64%	42.08%	36.97%	44.73
--complete, but take longer	17.17	16.18	19.95	20.16	18.52
--leave at program's initiative	11.58	9.35	10.17	8.31	9.88
--leave for other reasons	15.55	17.68	23.48	21.21	20.23

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for the Northeast region is 104; North Central region--158; South--242; and West--101.

TABLE A-65

MEAN RATING OF INFLUENCE OF VARIOUS PEOPLE OR ORGANIZATIONS ON ESTABLISHING CURRICULUM OR DETERMINING INSTRUCTIONAL APPROACHES, BY TYPE OF INSTITUTION

People/ organization	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
	ESTABLISHING CURRICULUM			
Chief admin. officer	2.17	2.02	2.20	2.14
Department's staff	1.10	1.23	1.11	1.14
Other departments' staff	2.96	3.08	2.94	2.99
Parents	3.64	3.63	3.66	3.64
Students	2.71	2.70	2.63	2.69
Institution's advisory board	2.26	2.03	2.73	2.29
Faculty union/ assoc.	3.58	3.53	3.82	3.61
Business and industry	1.80	1.76	2.40	1.90
JTPA/PIC	3.54	3.27	3.79	3.54
State educ. agencies	2.76	2.08	2.85	2.60
Former students	2.54	2.43	2.54	2.51
	DETERMINING INSTRUCTIONAL METHODS			
Chief admin. officer	2.48	2.06	2.57	2.39
Dept. chair	1.66	1.40	1.68	1.59
Instructors	1.08	1.22	1.09	1.12
Students	2.33	2.37	2.34	2.34
Advisory board	2.90	2.56	3.26	2.88
Faculty union/ assoc.	3.65	3.59	3.83	3.67
Business and industry	2.64	2.38	3.11	2.67
JTPA/PIC	3.62	3.47	3.86	3.62
State agencies	3.25	2.65	3.43	3.12

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination chairperson survey. Completed sample size is 605. Sample size for community and junior colleges is 326; technical institutes--162; and colleges and universities--117. Influence rating scale ranges from 1 = A great deal to 4 = None. (see question 12)

TABLE A-66

MEAN RATING OF INFLUENCE OF VARIOUS PEOPLE OR ORGANIZATIONS ON ESTABLISHING CURRICULUM OR DETERMINING INSTRUCTIONAL APPROACHES, BY CENSUS REGION

People/ organization	Region of the Country				Total
	Northeast	North Central	South	West	
	ESTABLISHING CURRICULUM				
Chief admin. officer	2.08	2.20	2.06	2.27	2.14
Department's staff	1.11	1.12	1.17	1.11	1.14
Other departments' staff	2.89	3.05	2.95	3.08	2.99
Parents	3.63	3.65	3.64	3.64	3.64
Students	2.75	2.66	2.71	2.64	2.69
Institution's advisory board	2.45	2.27	2.26	2.21	2.29
Faculty union/ assoc.	3.59	3.63	3.64	3.56	3.61
Business and industry	2.17	1.85	1.92	1.70	1.90
JTPA/PIC	3.66	3.54	3.49	3.40	3.54
State educ. agencies	3.04	2.72	2.24	2.85	2.60
Former students	2.66	2.39	2.51	2.54	2.51
	DETERMINING INSTRUCTIONAL METHODS				
Chief admin. officer	2.43	2.47	2.32	2.38	2.39
Dept. chair	1.59	1.71	1.48	1.70	1.59
Instructors	1.10	1.08	1.14	1.17	1.12
Students	2.49	2.28	2.31	2.38	2.34
Advisory board	3.01	3.00	2.82	2.71	2.88
Faculty union/ assoc.	3.56	3.61	3.74	3.68	3.67
Business and industry	2.97	2.62	2.63	2.52	2.67
JTPA/PIC	3.76	3.64	3.58	3.57	3.62
State agencies	3.37	3.25	2.90	3.22	3.12

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination chairperson survey. Completed sample size is 605. Sample size for the Northeast region is 104; North Central region--158; South--242; and West--101. Influence rating scale ranges from 1 = A great deal to 4 = None. (see question 12)

TABLE A-67

CURRICULUM CONTENT, COOPERATIVE EDUCATION, AND INDIVIDUALIZED LEARNING CHARACTERISTICS OF PROGRAMS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Curriculum content				
Percentage of program curriculum concerning--				
--Specific occasional skills	56.49%	68.92%	47.37%	58.05%
--General/transferable skills	20.99%	17.64%	20.02%	19.91%
--Basic academic skills	19.63%	16.93%	21.02%	19.18%
--Employability skills	8.01%	10.62%	5.22%	8.17%
Percentage of prgrams requiring work-study or cooperative education	29.37%	21.25%	37.90%	28.48%
Employer involvement in assigning grades for work experience				
--None	19.56%	12.12%	35.71%	22.15%
--Employers recommend	43.48%	36.36%	28.57%	38.32%
--Employers assign	7.61%	21.21%	11.90%	11.38%
--Employers & coordinators jointly determine	29.35	30.30%	23.81%	28.14%
Percentage of programs where individualized learning is integral part of curriculum	84.06%	91.25%	79.31%	85.07%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for community and junior colleges is 326; technical institutes--162; and colleges and universities--117.

TABLE A-68

CURRICULUM CONTENT, COOPERATIVE EDUCATION, AND INDIVIDUALIZED LEARNING CHARACTERISTICS OF PROGRAMS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Curriculum content					
Percentage of program curriculum concerning--					
--Specific occasional skills	52.11%	61.28%	57.44%	60.60%	58.05%
--General/transferable skills	24.84%	19.51%	18.99%	17.66%	19.91%
--Basic academic skills	24.77%	16.23%	20.55%	14.75%	19.18%
--Employability skills	7.39%	7.41%	9.04%	8.06%	8.17%
Percentage of programs requiring work-study or cooperative education	36.89%	32.90%	24.58%	22.22%	28.48%
Employer involvement in assigning grades for work experience					
--None	29.73%	14.00%	25.86%	18.18%	22.15%
--Employers recommend	29.73%	46.00%	34.48%	45.45%	38.32%
--Employers assign	10.81%	6.00%	15.52%	13.64%	11.38%
--Employers & coordinators jointly determine	29.73%	34.00%	24.14%	22.73%	28.14%
Percentage of programs where individualized learning is integral part of curriculum	84.31%	83.77%	85.06%	87.88%	85.07%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for the Northeast region is 104; North Central region--158; South--242; and West--101.

TABLE A-69

MEAN RATING OF INFLUENCE THAT VARIOUS FACTORS HAVE ON FACULTY SALARIES, BY TYPE OF INSTITUTION

Factor	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Quality of teaching	2.95	2.91	1.86	2.72
Professional activities	3.14	3.26	2.25	2.99
Community service	3.32	3.48	2.66	3.23
Collective bargaining agreement	2.48	2.77	3.49	2.76
Employer interaction	3.48	3.49	3.35	3.45
Longevity	1.73	1.94	2.25	1.89
Full-time or part-time status	1.34	1.94	1.69	1.57
Number of courses	2.36	3.11	2.37	2.56
Education level	1.69	1.72	1.61	1.68
Research activities	3.70	3.70	2.73	3.50

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for community and junior colleges is 326; technical institutes--162; and colleges and universities--117. The influence scale ranges from 1 = A great deal to 4 = None. (see question 18)

TABLE A-70

MEAN RATING OF INFLUENCE THAT VARIOUS FACTORS HAVE ON FACULTY SALARIES, BY CENSUS REGION

Factor	Region of the Country				Total
	Northeast	North Central	South	West	
Quality of teaching	2.58	2.83	2.56	3.10	2.72
Professional activities	2.80	3.05	2.92	3.28	2.99
Community service	3.14	3.33	3.13	3.43	3.23
Collective bargaining agreement	1.91	2.40	3.61	2.13	2.76
Employer interaction	3.49	3.59	3.37	3.42	3.45
Longevity	1.94	1.91	2.00	1.53	1.89
Full-time or part-time status	1.52	1.61	1.66	1.35	1.57
Number of courses	2.46	2.39	2.74	2.50	2.56
Education level	1.89	1.84	1.55	1.57	1.68
Research activities	3.31	3.46	3.55	3.66	3.50

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for the Northeast region is 104; North Central region--158; South--242; and West--101. The influence scale ranges from 1 = A great deal to 4 = None. (see question 18)

TABLE A-71

FACULTY ISSUES, BY TYPE OF INSTITUTION

Issue	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Mean number of announced and unannounced visits by chairperson/grading period				
--Announced, permanent staff	0.62	0.98	0.52	0.69
--Announced, temporary staff	0.53	0.36	0.50	0.48
--Unannounced, permanent staff	0.89	1.45	0.41	0.94
--Unannounced, temporary staff	0.57	0.64	0.32	0.54
Mean number of instructional staff--				
--Permanent, f-t, taught during 1985-86	5.75	4.68	5.28	5.37
--Permanent, p-t, taught during 1985-86	2.70	1.12	0.93	1.94
--Temporary, f-t, taught during '85-'86	0.25	0.07	0.31	0.21
--Temporary, p-t, taught during 85'-86'	5.64	1.94	3.47	4.22
--Permanent, f-t, will teach '86'-'87'	5.46	4.68	5.13	5.19
--Permanent, p-t, will teach '86-'87	2.63	1.22	0.92	1.92
--Temporary, f-t, will teach in '86-'87	0.23	0.28	0.32	0.26
--Temporary, p-t, will teach in 86-87	5.24	1.89	3.26	3.96
Percentage of programs with prof. devel. reqt. for faculty	30.31%	54.19%	24.56%	35.48%
Mean prof. development budget	$975	$2,339	$3,108	$1,809

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for community and junior colleges is 326; technical institutes--162; and colleges and universities--117.

TABLE A-72

FACULTY ISSUES, BY CENSUS REGION

Issue	Region of the Country				Total
	Northeast	North Central	South	West	
Mean number of announced and unannounced visits by chairperson/grading period					
--Announced, permanent staff	0.58	0.63	0.71	0.87	0.69
--Announced, temporary staff	0.53	0.47	0.33	0.83	0.48
--Unannounced, permanent staff	0.41	0.97	1.08	1.16	0.94
--Unannounced, temporary staff	0.42	0.58	0.52	0.67	0.54
Mean number of instructional staff--					
--Permanent, f-t, taught during 1985-86	4.16	6.16	5.13	5.98	5.37
--Permanent, p-t, taught during 1985-86	0.66	2.72	1.06	4.12	1.94
--Temporary, f-t, taught during '85-'86	0.26	0.35	0.13	0.15	0.21
--Temporary, p-t, taught during 85'-86'	4.50	3.72	3.89	5.55	4.22
--Permanent, f-t, will teach '86'-'87'	4.12	6.08	4.73	6.00	5.19
--Permanent, p-t, will teach '86-'87	0.61	2.64	0.98	4.41	1.92
--Temporary, f-t, will teach in '86-'87	0.24	0.33	0.22	0.28	0.26
--Temporary, p-t, will teach in 86-87	4.19	3.51	3.49	5.57	3.96
Percentage of programs with prof. devel. reqt. for faculty	18.63%	34.42%	43.16%	36.36%	35.48%
Mean prof. development budget	$1,120	$1,367	$2,480	$938	$1,809

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for the Northeast region is 104; North Central region--158; South--242; and West--101.

TABLE A-73

MEAN RATINGS OF DEGREE OF IMPORTANCE FOR VARIOUS INSTITUTIONAL GOALS, BY TYPE OF INSTITUTION

Goals	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Prepare students to be good citizens	2.02	1.88	1.93	1.97
Develop basic skills	1.34	1.26	1.40	1.34
Develop students' abilities to solve probs. and think critically	1.49	1.36	1.30	1.42
Prepare students to be competent consumers	2.37	2.38	2.50	2.40
Prepare students for further schooling	1.92	2.31	1.97	2.03
Provide in-school training for specific occns.	1.47	1.28	1.86	1.50
Give students a broad gen. career preparation	1.87	2.06	1.59	1.87
Place students in jobs	1.78	1.32	1.93	1.69

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for community and junior colleges is 326; technical institutes--162; and colleges and universities--117. Degree of importance scale ranges from 1 = Very important to 4 = Not at all important. (see question 23)

TABLE A-74

MEAN RATINGS OF DEGREE OF IMPORTANCE FOR VARIOUS INSTITUTIONAL GOALS, BY CENSUS REGION

Goals	Region of the Country				Total
	Northeast	North Central	South	West	
Prepare students to be good citizens	2.07	2.05	1.85	2.00	1.97
Develop basic skills	1.24	1.42	1.29	1.42	1.34
Develop students' abilities to solve probs. and think critically	1.38	1.38	1.40	1.54	1.42
Prepare students to be competent consumers	2.61	2.41	2.33	2.36	2.40
Prepare students for further schooling	1.80	2.10	2.13	1.91	2.03
Provide in-school training for specific occns.	1.54	1.52	1.52	1.34	1.50
Give students a broad gen. career preparation	1.64	1.95	1.87	1.96	1.87
Place students in jobs	1.69	1.59	1.69	1.84	1.69

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for the Northeast region is 104; North Central region--158; South--242; and West--101. Degree of importance scale ranges from 1 = Very important to 4 = Not at all important. (see question 23)

TABLE A-75

LEVEL OF AGREEMENT WITH FACTORS THAT INFLUENCE CURRICULUM AND INSTRUCTION, BY TYPE OF INSTITUTION

Factors	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
a. Inadequate student preparation in basic skills restricts curriculum	3.70	3.80	3.54	3.69
b. P-t instructors constrain effective institution	2.52	2.46	2.55	2.51
c. Outdated facilities restrict curriculum/ institution	3.26	3.20	3.22	3.23
d. Resources spent on non-instructional purposes are excessive	2.45	2.31	2.28	2.38
e. Student discipline problems restrict instruction	2.04	2.39	1.99	2.13
f. Students work and have limited time to study which constrains instruction	3.14	3.20	2.87	3.10
g. Collective bargaining of faculty restricts curriculum	2.26	2.30	2.14	2.25
h. Inadequate student preparation in science/math restricts curriculum	3.28	3.56	3.37	3.37
i. Community, faculty, or student pressures restrict course cancellations	2.25	2.24	2.36	2.27
j. Inadequate funding restricts curricula	3.48	3.25	3.56	3.43
k. Competition for students causes us to offer programs we otherwise would not offer	2.24	2.23	2.22	2.23
l. Open-entry policy restricts programs	2.32	2.25	2.34	2.31

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for community and junior colleges is 326; technical institutes--162; and colleges and universities--117. Influence scale ranges from 1 = Strongly disagree to 5 = Strongly agree. (see question 24)

TABLE A-76

LEVEL OF AGREEMENT WITH FACTORS THAT INFLUENCE CURRICULUM AND INSTRUCTION, BY CENSUS REGION

Factors	Region of the Country				Total
	Northeast	North Central	South	West	
a. Inadequate student preparation in basic skills restricts curriculum	3.88	3.58	3.76	3.54	3.69
b. P-t instructors constrain effective institution	2.44	2.52	2.52	2.55	2.51
c. Outdated facilities restrict curriculum/institution	3.26	3.23	3.11	3.52	3.23
d. Resources spent on non-instructional purposes are excessive	2.46	2.28	2.36	2.51	2.38
e. Student discipline problems restrict instruction	2.00	2.06	2.21	2.14	2.13
f. Students work and have limited time to study which constrains instruction	3.10	2.96	3.25	2.98	3.10
g. Collective bargaining of faculty restricts curriculum	2.12	2.18	2.30	2.35	2.25
h. Inadequate student preparation in science/math restricts curriculum	3.61	3.17	3.37	3.45	3.37
i. Community, faculty, or student pressures restrict course cancellations	2.19	2.15	2.36	2.34	2.27
j. Inadequate funding restricts curricula	3.31	3.33	3.39	3.85	3.43
k. Competition for students causes us to offer programs we otherwise would not offer	2.19	2.05	2.30	2.37	2.23
l. Open-entry policy restricts programs	2.40	2.23	2.31	2.34	2.31

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for the Northeast region is 104; North Central region--158; South--242; and West--101. Influence scale ranges from 1 = Strongly disagree to 5 = Strongly agree. (see question 24)

TABLE A-77

FACILITY AND EQUIMENT CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristics	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Mean rank ordering on a 3-point scale of needed facilities--				
--Classroom renovation	2.21	2.10	2.00	2.15
--Larger lab facilities	1.80	1.76	1.89	1.80
--More modern equipment	1.68	1.77	1.77	1.72
--Instructional equip.	1.84	1.79	1.78	1.81
--Demonstration equip. models	2.29	2.16	2.28	2.25
--Office space	2.16	2.09	2.40	2.20
--Office equipment	2.40	2.38	2.18	2.34
Value of donated equipment rec'd over last 3 years--				
--None	44.69%	36.42%	27.43%	39.13%
--$1-5,000	23.47	33.77	29.20	27.30
--$5,001-10,000	9.32	11.26	7.96	9.57
--$10,001-25,000	8.36	7.95	10.62	8.70
--$25,001-50,000	4.50	1.99	11.50	5.22
--$50,001-100,000	4.18	3.31	8.85	4.87
--$100,000+	5.47	5.30	4.42	5.22

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for community and junior colleges is 326; technical institutes--162; and colleges and universities--117.

TABLE A-78

FACILITY AND EQUIPMENT CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Mean rank ordering on a 3-point scale of needed facilities--					
--Classroom renovation	2.19	2.14	2.15	2.09	2.15
--Larger lab facilities	1.84	1.73	1.80	1.90	1.80
--More modern equipment	1.65	1.72	1.82	1.55	1.72
--Instructional equip.	1.67	1.80	1.79	2.02	1.81
--Demonstration equip. models	2.30	2.21	2.23	2.33	2.25
--Office space	2.12	2.36	2.17	2.00	2.20
--Office equipment	2.23	2.40	2.29	2.50	2.34
Value of donated equipment rec'd over last 3 years					
--None	50.52%	34.21%	44.98%	21.65%	39.13%
--$1-5,000	17.53	33.55	25.33	31.96	27.30
--$5,001-10,000	6.19	13.16	8.30	10.31	9.57
--$10,001-25,000	13.40	7.24	6.55	11.34	8.70
--$25,001-50,000	8.25	3.29	5.68	4.12	5.22
--$50,001-100,000	1.03	3.29	4.80	11.34	4.87
--$100,000+	3.09	5.26	4.37	9.28	5.22

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for the Northeast region is 104; North Central region--158; South--242; and West--101.

TABLE A-79

STUDENT CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Gender--				
--Female	46.35%	46.77%	52.79%	47.73%
--Male	53.65	53.23	47.21	52.27
Ethnicity--				
--White	69.84%	73.41%	78.51%	72.49%
--Black	9.98	11.77	11.61	10.77
--Hispanic	8.27	3.14	2.41	5.74
--Other	4.94	2.38	3.45	3.97
Handicapped	2.47%	2.89%	2.31%	2.55%
LEP	5.09%	2.40%	3.64%	4.09%
Econ. disad.	22.16%	29.02%	16.06%	22.82%
JTPA	4.24%	11.73%	1.17%	5.65%
Single parents	12.01%	12.72%	5.82%	11.00%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for community and junior colleges is 326; technical institutes--162; and colleges and universities--117.

TABLE A-80

STUDENT CHARACTERISTICS, BY CENSUS REGION

Charasteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Gender--					
--Female	48.02%	45.90%	49.59%	45.81%	47.73%
--Male	51.98	54.10	50.42	54.19	52.27
Ethnicity--					
--White	78.63%	80.49%	67.07%	66.55%	72.49%
--Black	7.70	5.94	18.22	3.66	10.77
--Hispanic	3.32	2.18	6.50	11.83	5.74
--Other	2.79	2.32	2.16	12.01	3.97
Handicapped	2.45%	2.21%	2.63%	2.98%	2.55%
LEP	3.28%	2.26%	4.41%	7.01%	4.09%
Econ. disad.	12.68%	23.68%	25.51%	25.44%	22.82%
JTPA	2.76%	8.05%	5.59%	5.03%	5.65%
Single parents	7.06%	12.49%	10.93%	12.37%	11.00%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for the Northeast region is 104; North Central region--158; South--242; and West--101.

TABLE A-81

PERCENTAGE OF STUDENTS TAKING SPECIAL CLASSES, BY TYPE OF INSTITUTION

Special class	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Developmental educ. course in reading	14.12%	11.15%	13.42%	13.19%
Developmental educ. course in math	14.74%	17.04%	17.82%	15.95%
Pre-tech course	3.75%	5.14%	3.52%	4.08%
Individualized counseling/ follow-through	15.76%	15.22%	14.34%	15.34%
Specialized tutorial experience	10.91%	8.80%	13.08%	10.76%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for community and junior colleges is 326; technical institutes--162; and colleges and universities--117.

TABLE A-82

PERCENTAGE OF STUDENTS TAKING SPECIAL CLASSES,
BY CENSUS REGION

Special class	Region of the Country				Total
	Northeast	North Central	South	West	
Developmental educ. course in reading	13.65%	11.30%	16.00%	8.93%	13.19%
Developmental educ. course in math	14.51%	15.22%	18.52%	12.43%	15.95%
Pre-tech course	2.88%	4.32%	4.85%	3.09%	4.08%
Individualized counseling/ follow-through	16.04%	13.06%	16.97%	14.28%	15.34%
Specialized tutorial experience	11.97%	9.44%	11.13%	10.71%	10.76%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for the Northeast region is 104; North Central region--158; South--242; and West--101.

TABLE A-83

PERCENTAGE OF PROGRAMS UNDERTAKING VARIOUS PROGRAM IMPROVEMENT ACTIVITIES, BY TYPE OF INSTITUTION

Activity	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Increased completion requirements	42.95%	49.66%	42.98%	44.72%
Competency testing	22.41%	32.89%	13.91%	23.45%
Increased entrance requirements	20.85%	18.00%	18.97%	19.72%
Stiffened grading standards	33.33%	33.77%	34.48%	33.69%
Increased emphasis on basic academic skills	50.81%	52.60%	40.52%	49.22%
Added requirements for courses outside program	45.67%	32.21%	46.96%	42.38%
Increased hiring standards	28.28%	20.27%	39.66%	28.52%
Placed emphasis on retention of special needs students	48.84%	47.74%	33.91%	45.53%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for community and junior colleges is 326; technical institutes--162; and colleges and universities--117.

TABLE A-84

PERCENTAGE OF PROGRAMS UNDERTAKING VARIOUS PROGRAM IMPROVEMENT ACTIVITIES, BY CENSUS REGION

Activity	Region of the Country				Total
	Northeast	North Central	South	West	
Increased completion requirements	30.53%	43.05%	47.58%	54.74%	44.72%
Competency testing	12.63%	20.27%	25.45%	34.38%	23.45%
Increased entrance requirements	13.68%	15.69%	23.25%	23.71%	19.72%
Stiffened grading standards	29.17%	27.03%	39.47%	34.78%	33.69%
Increased emphasis on basic academic skills	50.52%	45.70%	48.92%	54.08%	49.22%
Added requirements for courses outside program	45.74%	30.00%	48.67%	43.62%	42.38%
Increased hiring standards	25.26%	28.77%	31.72%	23.66%	28.52%
Placed emphasis on retention of special needs students	50.53%	43.71%	45.65%	43.16%	45.53%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for the Northeast region is 104; North Central region--158; South--242; and West--101.

TABLE A-85

JOB CHARACTERISTICS OF CHAIRPERSONS, BY TYPE OF INSTITUTION

Characteristics	Institution Type: Community and Junior Colleges	Institution Type: Technical Institutes	Institution Type: Colleges and Universities	Total
Mean number of courses taught during academic year--				
--Quarter system	8.90	8.47	8.96	8.77
--Semester system	6.14	4.65	5.88	5.94
Mean class size for classes taught	20.22	17.50	21.69	19.84
Percentage with training in--				
--Teaching the handicapped	25.08%	37.50%	16.52%	26.63%
--Working with LEP students	7.67%	10.88%	7.83%	8.52%
--Teaching dropout prone students	28.03%	37.58%	14.78%	27.85%
--Working with students in nontraditional programs	28.53%	35.17%	20.00%	28.50%
--Teaching basic skills (reading, math)	54.89%	64.86%	46.09%	55.69%
--Addressing needs of single parents	14.65%	25.17%	6.96%	15.80%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for community and junior colleges is 326; technical institutes--162; and colleges and universities--117.

TABLE A-86

JOB CHARACTERISTICS OF CHAIRPERSONS, BY CENSUS REGION

Characteristics	Region of the Country				Total
	Northeast	North Central	South	West	
Mean number of courses taught during academic year--					
--Quarter system	4.40	8.85	8.60	10.00	8.77
--Semester system	5.54	6.41	6.51	4.98	5.94
Mean class size for classes taught	20.07	19.64	18.67	23.03	19.84
Percentage with training in--					
--Teaching the handicapped	18.00%	29.80%	27.59%	28.28%	26.63%
--Working with LEP students	6.12%	8.05%	8.70%	11.22%	8.52%
--Teaching dropout prone students	13.27%	30.00%	31.33%	30.93%	27.85%
--Working with students in nontraditional programs	17.35%	36.05%	23.91%	39.18%	28.50%
--Teaching basic skills (reading, math)	48.48%	59.33%	54.31%	60.61%	55.69%
--Addressing needs of single parents	8.08%	21.33%	15.28%	16.33%	15.80%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for the Northeast region is 104; North Central region--158; South--242; and West--101.

TABLE A-87

MEAN HOURS/WEEK SPENT BY CHAIRPERSONS IN VARIOUS ACTIVITIES, BY TYPE OF INSTITUTION

Activity	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Office hours	9.34	6.85	10.86	8.98
Admin. paperwork	8.02	5.66	8.06	7.42
Class preparation	6.54	4.90	8.02	6.42
Student counseling --Personal probs.	2.90	2.82	3.30	2.98
Student counseling --Career concerns	3.34	2.62	3.78	3.22
Tutoring/working with special needs' students	2.35	2.08	2.05	2.23
Contacting employers	1.48	2.20	1.25	1.63
Undertaking research	1.23	1.80	1.55	1.45
Extracurricular activities	1.23	0.93	1.13	1.13
Wk.-self-employed	1.20	1.40	0.93	1.20
Working outside institution	0.38	0.68	0.90	0.55
Background reading in subject	4.14	4.18	4.22	4.18
Other background reading	2.30	2.48	2.62	2.40
Dev. activities or materials	1.73	1.85	1.48	1.70
Addn'l prof. train.	1.90	2.30	1.70	1.95

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for community and junior colleges is 326; technical institutes--162; and colleges and universities--117.

TABLE A-88

MEAN HOURS/WEEK SPENT BY CHAIRPERSONS IN VARIOUS ACTIVITIES, BY CENSUS REGION

Activity	Region of the Country				Total
	Northeast	North Central	South	West	
Office hours	6.94	10.06	9.22	8.98	8.98
Admin. paperwork	6.14	7.90	7.06	8.86	7.42
Class preparation	7.66	6.30	5.94	6.46	6.42
Student counseling --Personal probs.	3.06	2.58	3.02	3.30	2.98
Student counseling --Career concerns	3.86	3.22	2.78	3.74	3.22
Tutoring/working with special needs' students	2.20	2.10	2.25	2.40	2.23
Contacting employers	1.80	1.50	1.63	1.63	1.63
Undertaking research	1.70	1.48	1.40	1.30	1.45
Extracurricular activities	1.48	0.65	1.23	1.23	1.13
Wk.-self-employed	1.63	0.93	1.30	0.95	1.20
Working outside institution	1.00	0.58	0.53	0.20	0.55
Background reading in subject	4.58	4.10	4.02	4.22	4.18
Other background reading	2.30	2.40	2.33	2.86	2.40
Dev. activities or materials	1.80	1.68	1.65	1.80	1.70
Addn'l prof. train.	2.23	1.93	1.88	1.98	1.95

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for the Northeast region is 104; North Central region--158; South--242; and West--101.

TABLE A-89

PERSONAL CHARACTERISTICS OF CHAIRPERSONS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Mean age	47.69	47.27	48.91	47.82
Gender				
--Females	28.53%	28.30%	20.87%	26.98%
--Males	71.47	71.70	79.13	73.02
Ethnicity				
--Black	3.14%	5.70%	4.35%	4.06%
--White	91.82	93.04	93.91	92.55
--Other	5.04	1.26	1.74	3.39
Highest degree				
--Doctorate	16.39%	6.56%	47.79%	20.79%
--Master's	67.56	56.56	41.59	59.55
--Bachelor's	13.04	30.33	8.85	16.10
--Associate	3.01	6.56	1.77	3.56
Mean salary	$48,358	$25,867	$30,024	$38,864
Mean tenure (months)	130.95	124.75	115.73	126.26

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for community and junior colleges is 326; technical institutes--162; and colleges and universities--117.

TABLE A-90

PERSONAL CHARACTERISTICS OF CHAIRPERSONS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Mean age	46.69	47.41	47.65	50.01	47.82
Gender					
--Females	32.00%	22.44%	29.83%	22.22%	26.98%
--Males	68.00	77.56	70.17	77.78	73.02
Ethnicity					
--Black	1.00%	2.58%	7.59%	1.01%	4.06%
--White	97.00	94.84	89.03	92.93	92.55
--Other	2.00	2.59	3.37	6.06	3.39
Highest degree					
--Doctorate	15.46%	21.17%	25.85%	14.74%	20.79%
--Master's	62.89	61.31	54.15	65.26	59.55
--Bachelor's	19.59	15.33	15.61	14.74	16.10
--Associate	2.06	2.19	4.39	5.26	3.56
Mean salary	$38,152	$42,486	$39,097	$33,744	$38,864
Mean tenure (months)	115.00	128.68	125.38	135.63	126.26

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination project chairperson survey. Completed sample size is 605. Sample size for the Northeast region is 104; North Central region--158; South--242; and West--101.

TABLE A-91

INSTRUCTORS' TEACHING LOAD AND TRAINING CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Mean no. of courses taught during 1986-87				
--Quarter system	8.85	6.41	8.19	7.78
--Semesters	6.38	4.34	6.43	6.18
Mean teaching hours per week	17.05	22.69	14.48	18.15
Mean class size	19.30	17.18	20.36	18.90
Mean no. of courses taken in subject area				
--Undergraduate	3.81	3.56	3.54	3.69
--Graduate	3.12	2.50	3.18	2.98
Percentage of instructors who have taught in different departments in last 2 years	22.78%	20.88%	26.99%	23.03%
Length of time with state certification				
--State cert. not required	34.19%	16.17%	50.71%	32.02%
--Not certified	11.94	7.19	14.69	11.07
--Less than 1 yr.	2.26	6.89	2.37	3.61
--2-5 yrs.	9.03	21.86	3.79	11.76
--5+ yrs.	42.42	47.90	28.43	41.46

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228.

TABLE A-92

INSTRUCTORS' TEACHING LOAD AND TRAINING CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Mean no. of courses taught during 1986-87					
--Quarter system	5.63	7.22	7.58	10.17	7.78
--Semesters	5.51	6.52	6.26	6.46	6.18
Mean teaching hours per week	14.69	18.53	19.30	18.16	18.15
Mean class size	20.59	18.99	17.42	20.64	18.90
Mean no. of courses taken in subject area					
--Undergraduate	3.49	3.75	3.64	3.91	3.69
--Graduate	2.86	3.05	2.98	3.01	2.98
Percentage of instructors who have taught in different departments in last 2 years	26.73%	20.82%	22.51%	24.76%	23.03%
Length of time with state certification					
--State cert. not required	50.79%	26.76%	35.46%	14.22%	32.02%
--Not certified	17.28	10.03	10.83	7.35	11.07
--Less than 1 yr.	0.52	4.01	4.25	4.41	3.61
--2-5 yrs.	1.57	17.39	10.19	16.67	11.76
--5+ yrs.	29.84	41.48	39.27	57.36	41.46

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210.

TABLE A-93

FACTORS AFFECTING INSTRUCTIONAL METHODS AND CURRICULUM, BY TYPE OF INSTITUTION

Factor	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Mean influence and control rating[a] for--				
--Establishing a new course	3.81	3.76	3.76	3.79
--Selecting course content	4.41	4.38	4.53	4.42
--Selecing instructor techniques	4.71	4.61	4.80	4.70
--Selecting texts	4.45	4.47	4.56	4.48
Mean importance rating[a] for sources of information for curriculum development--				
--State's vocational education plan	2.76	3.57	2.15	2.87
--State occn'l information coordinating cte.	2.29	2.67	1.80	2.30
--Employment Service	2.09	2.27	1.63	2.06
--Advisory committee	3.69	3.86	3.02	3.61
--Surveys of employers	3.50	3.68	2.97	3.45
Percentage of instructors that would use following resources to update program:				
--State instructional materials lab	48.74%	59.45%	37.85%	49.74%
--Curricululm coordination center	54.55%	56.13%	41.31%	52.57%
--Educational publishers	64.81%	65.33%	61.03%	64.26%
--Commercial publishers	91.32%	90.96%	94.47%	91.79%
--R&D agencies	57.75%	58.82%	61.68%	58.77%
--Local materials	90.88%	94.91%	90.74%	91.98%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228.

[a] Influence and control rating and importance ranges from 1 = None to 5 = A great deal. (See question 10, 31)

TABLE A-94

FACTORS AFFECTING INSTRUCTIONAL METHODS AND CURRICULUM, BY CENSUS REGION

Factor	Region of the Country				Total
	Northeast	North Central	South	West	
Mean influence and control rating[a] for--					
--Establishing a new course	3.63	3.81	3.75	3.99	3.79
--Selecting course content	4.43	4.44	4.38	4.50	4.42
--Selecting instructional techniques	4.76	4.71	4.64	4.75	4.70
--Selecting texts	4.55	4.51	4.37	4.60	4.48
Mean importance rating[a] for sources of information for curriculum development--					
--State's vocational education plan	2.13	2.89	3.23	2.70	2.87
--State occupational info. coord. cte.	1.79	2.29	2.60	2.10	2.30
--Employment Service	1.71	2.07	2.17	2.11	2.06
--Advisory committee	3.24	3.65	3.59	3.94	3.61
--Surveys of employers	3.34	3.43	3.51	3.46	3.45
Percentage of instructors that would use following res. to update program:					
--State instructional material lab.	33.33%	51.48%	56.96%	45.00%	49.74%
--Curriculum Coordin. Center	38.22%	56.44%	55.58%	52.76%	52.48%
--Educational publishers	59.79%	63.93%	66.17%	64.82%	64.32%
--Commericial publishers	91.84%	91.91%	91.17%	93.14%	91.81%
--R&D agencies	55.26%	55.96%	61.72%	59.20%	58.75%
--Local materials	89.74%	92.23%	91.62%	94.66%	91.99%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210.

[a] Influence and control ratings and importance ranges from 1 = None to 5 = A great deal. (See questions 10, 31)

TABLE A-95

MEAN HOURS/MONTH SPENT WITH GROUPS/INDIVIDUALS ON COURSE PLANNING, BY TYPE OF INSTITUTION

Groups/individuals	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Department chair or supervisor	4.60	4.52	4.28	4.52
Other institutional officials	1.74	1.89	1.50	1.74
Advisory committee	1.74	2.13	1.41	1.80
Other instructors	6.20	5.64	5.08	5.80
Guidance/placement staff	1.86	2.28	1.47	1.89
Employers (other than advis. cte.)	2.25	2.52	1.59	2.19

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228.

TABLE A-96

MEAN HOURS/MONTH SPENT WITH GROUP/INDIVIDUALS ON COURSE PLANNING, BY CENSUS REGION

Groups/individuals	Region of the Country				Total
	Northeast	North Central	South	West	
Department chair or supervisor	3.48	5.00	4.28	5.40	4.52
Other institutional officials	1.41	1.80	1.86	1.68	1.74
Advisory committee	1.41	1.86	1.77	2.10	1.80
Other instructors	4.44	6.68	5.64	6.20	5.80
Guidance/placement staff	1.74	1.92	1.86	2.10	1.89
Employers (other than advis. cte.)	1.47	2.52	2.16	2.43	2.19

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210.

TABLE A-97

PERCENTAGE OF INSTRUCTORS WITH VARIOUS TYPES OF SPECIAL INSTRUCTIONAL TRAINING, BY TYPE OF INSTITUTION

Type of training	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Teaching handicapped	35.37%	37.76%	19.47%	33.09%
Working with LEP students	13.34%	13.65%	11.06%	13.00%
Teaching disadvantaged or at-risk students	32.93%	40.65%	27.43%	34.04%
Working with students in programs nontraditional for their sex	32.06%	41.25%	28.25%	33.91%
Teaching basic academic skills	70.99%	79.30%	67.11%	72.61%
Addressing needs of single parents	22.31%	25.30%	16.07%	21.98%
Addressing needs of older students	40.55%	46.04%	36.61%	41.36%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228.

TABLE A-98

PERCENTAGE OF INSTRUCTORS WITH VARIOUS TYPES OF SPECIAL INSTRUCTIONAL TRAINING, BY CENSUS REGION

Type of training	Region of the Country				Total
	Northeast	North Central	South	West	
Teaching handicapped	24.88%	35.53%	33.33%	36.41%	33.03%
Working with LEP students	12.06%	10.44%	12.07%	20.00%	12.98%
Teaching disadvantaged or at-risk students	23.50%	34.70%	38.35%	32.52%	33.99%
Working with students in programs non-traditional for their sex	24.87%	36.39%	32.66%	41.46%	33.86%
Teaching basic academic skills	65.17%	74.29%	73.96%	74.27%	72.65%
Addressing needs of single parents	17.26%	24.68%	20.12%	26.70%	21.95%
Addressing needs of older students	35.00%	46.35%	38.92%	45.41%	41.29%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210.

TABLE A-99

GRADING AND TESTING POLICIES OF INSTRUCTORS, BY TYPE OF INSTITUTION

Policy	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Mean importance rating[a] of grading criteria--				
--Absolute level of achievement	3.35	3.40	3.49	3.39
--Relative achievement	2.52	2.48	2.65	2.53
--Individual improvement	3.15	3.37	2.87	3.16
--Effort	3.27	3.50	2.92	3.26
--Class participation	3.04	3.31	2.85	3.08
Mean number of major exams/grading period	3.16	3.33	3.05	3.19
Mean number of quizzes	3.30	4.66	3.20	3.50
Composition of exams--				
--Objective	48.05%	40.37%	52.58%	46.70%
--Subjective	20.11	15.03	24.35	19.52
--Demonstrations	31.30	40.26	22.83	32.24
Mean percentage of stu. that instruc. formally recog. for performance	17.84%	33.99%	11.09%	21.06%
Percentage of instructors that receive student evaluations	90.30%	74.85%	94.71%	86.82%
Mean rating of usefulness of student evaluations[b]	2.99	3.04	2.90	2.98
Mean number of class periods missed in past 12 months	1.90	2.18	2.70	2.12
Mean number of times observed by supervisor	1.33	2.09	0.76	1.43

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228.

[a] Importance rating ranges from 1 = Not important to 4 = Very important. (see question 13)

[b] Usefulness rating ranges from 1 = Not useful to 4 = Very useful. (see question 20)

TABLE A-100

GRADING AND TESTING POLICIES OF INSTRUCTORS, BY CENSUS REGION

Policy	Region of the Country				Total
	Northeast	North Central	South	West	
Mean importance rating[a] of grading criteria--					
--Absolute level of achievement	3.43	3.37	3.44	3.27	3.39
--Relative achievement	2.56	2.50	2.57	2.46	2.53
--Individual improvement	3.17	3.05	3.21	3.21	3.16
--Effort	3.20	3.23	3.28	3.32	3.26
--Class participation	3.06	3.01	3.13	3.10	3.08
Mean number of major exams/grading period	2.86	3.49	3.23	2.95	3.19
Mean number of quizzes	3.54	3.58	3.38	3.58	3.50
Composition of exams--					
--Objective	49.50%	46.40%	45.77%	46.64%	46.70%
--Subjective	25.28	18.56	18.69	17.37	19.52
--Demonstrations	24.18	33.39	33.92	34.28	32.24
Mean percentage of stu. that instruc. formally recog. for performance	15.89	24.72	20.12	22.81	21.06
Percentage of instructors that receive student evaluations	87.68	87.11	86.48	86.47	86.84%
Mean rating of usefulness of student evaluations[b]	2.88	2.89	3.01	3.14	2.98
Mean number of class periods missed in past 12 months	1.74	2.22	2.34	1.78	2.12
Mean number of times observed by supervisor	1.03	1.35	1.62	1.47	1.43

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210.

[a] Importance rating ranges from 1 = Not important to 4 = Very important. (see question 13).

[b] Usefulness rating ranges from 1 = Not useful to 4 = Very useful. (see question 20)

TABLE A-101

ASSIGNMENTS AND CLASS TIME USAGE CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Mean number of writing assignments during grading period	2.54	1.94	3.02	2.46
Typical number of hours/week spent on basic--				
--Reading skills	0.82	1.06	0.62	0.84
--Math skills	1.11	1.65	0.90	1.21
Percentage of class time spent on--				
--Maintenance activities	7.79%	9.98%	5.44%	7.96%
--Instruction	52.59	37.55	64.14	50.59
--Student practice	39.38	51.78	30.04	41.06

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228.

TABLE A-102

ASSIGNMENTS AND CLASS TIME USAGE CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Mean number of writing assignments during grading period	2.54	2.64	2.34	2.38	2.46
Typical number of hours/week spent on basic--					
--Reading skills	1.68	1.79	1.90	1.92	0.84
--Math skills	0.95	1.24	1.30	1.21	1.21
Percentage of class time spent on--					
--Maintenance activities	6.97%	8.70%	8.03%	7.60%	7.96%
--Instruction	56.36	50.33	49.36	48.36	50.59
--Student practice	36.06	40.09	42.44	44.08	41.06

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210.

TABLE A-103

MEAN HOURS/WEEK SPENT BY INSTRUCTOR ON VARIOUS ACTIVITIES, BY TYPE OF INSTITUTION

Activity	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Office hours	6.22	3.62	6.58	5.58
Admin. paperwork	3.22	3.26	3.10	3.18
Class preparation	8.06	6.14	9.14	7.74
Student counseling --Personal probs.	2.43	2.10	2.45	2.35
Student counseling --Career concerns	2.66	2.13	2.58	2.45
Tutoring/working with special needs' students	2.74	2.45	2.43	2.62
Contacting employers	1.30	1.78	0.93	1.35
Undertaking research	1.70	2.08	2.05	1.88
Extracurricular activities	1.28	1.10	1.48	1.25
Wk.-self-employed	1.93	2.05	1.80	1.93
Working outside institution	1.70	1.65	1.35	1.63
Background reading in subject	4.54	4.38	4.50	4.50
Other background reading	1.98	1.95	1.93	1.95
Dev. activities or materials	1.83	1.90	1.33	1.78
Addn'l prof. train.	2.73	2.43	1.93	2.23

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228.

TABLE A-104

MEAN HOURS/WEEK SPENT BY INSTRUCTOR ON VARIOUS ACTIVITIES, BY CENSUS REGION

Activities	Region of the Country				Total
	Northeast	North Central	South	West	
Office hours	3.94	5.54	6.30	5.38	5.58
Admin. paperwork	2.90	3.06	3.26	3.54	3.18
Class preparation	8.42	7.98	7.22	7.86	7.74
Student counseling --Personal probs.	2.15	2.23	2.43	2.48	2.35
Student counseling --Career concerns	2.30	2.40	2.50	2.66	2.45
Tutoring/working with special needs' students	2.50	2.43	2.78	2.58	2.62
Contacting employers	1.05	1.50	1.45	1.23	1.35
Undertaking research	2.03	1.75	1.88	1.95	1.88
Extracurricular activities	1.48	1.08	1.33	1.20	1.25
Wk.-self-employed	2.43	2.20	1.60	1.90	1.93
Working outside institution	1.90	1.68	1.43	1.80	1.63
Background reading in subject	4.82	4.50	4.34	4.66	4.50
Other background reading	1.90	2.00	1.98	2.15	1.95
Dev. activities or materials	1.60	1.78	1.85	1.73	1.78
Addn'l prof. train.	1.83	2.33	2.30	2.33	2.23

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210.

TABLE A-105

MEAN INFLUENCE OF FACTORS AFFECTING FACULTY SALARIES, BY TYPE OF INSTITUTION

Factor	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Quality of teaching	3.01	3.01	2.37	2.89
Professional activities	3.11	3.27	2.50	3.04
Community service	3.34	3.48	2.92	3.30
Collective bargaining agreement	2.60	2.93	3.26	2.82
Employer interaction	3.41	3.39	3.28	3.38
Longevity	1.88	1.90	2.34	1.97
Full-time or part-time status	1.59	1.86	1.80	1.70
Number of courses	2.38	3.10	2.58	2.62
Education level	1.82	1.79	1.79	1.81
Research activities	3.54	3.61	2.83	3.43

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228. Influence rating ranges from 1 = A great deal to 4 = None. (see question 24)

TABLE A-106

MEAN INFLUENCE RATING OF FACTORS AFFECTING FACULTY SALARIES, BY CENSUS REGION

Factor	Region of the Country				Total
	Northeast	North Central	South	West	
Quality of teaching	2.89	2.93	2.73	3.19	2.89
Professional activities	2.99	3.11	2.94	3.24	3.04
Community service	3.32	3.38	3.17	3.46	3.30
Collective bargaining agreement	2.10	2.45	3.56	2.31	2.82
Employer interaction	3.45	3.40	3.27	3.54	3.38
Longevity	2.06	1.98	2.02	1.78	1.97
Full-time or part-time status	1.75	1.72	1.76	1.50	1.70
Number of courses	2.58	2.58	2.69	2.53	2.62
Education level	2.11	1.89	1.62	1.82	1.81
Research activities	3.42	3.41	3.39	3.53	3.43

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210. Influence rating ranges from 1 = A great deal to 4 = None. (see question 24)

TABLE A-107

MEAN ATTITUDINAL DATA CONCERNING THE INSTITUTION AND STUDENTS, BY TYPE OF INSTITUTION

Attitude	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Staff members don't have much school spirit	2.58	2.33	2.42	2.48
Student use of drugs/alcohol is well below aver.	3.43	3.45	3.56	3.46
Student tardiness/ absences are very prevalent	2.59	2.67	2.56	2.61
Student attitudes/ habits are not conducive to learning	2.18	2.25	2.19	2.20
This institution seems like a big family	3.02	3.26	3.18	3.12
There is very little cooperative effort among staff and among students	2.16	2.02	2.13	2.12
A very "positive" climate exists	3.42	3.65	3.56	3.52
Staff have many opportunities for inservice training	3.27	3.60	3.12	3.34

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228. Attitudinal scale ranges from 1 = Strongly disagree to 5 = Strongly agree. (see question 25)

TABLE A-108

MEAN ATTITUDINAL DATA CONCERNING THE INSTITUTION AND STUDENTS, BY CENSUS REGION

Attitude	Region of the Country				Total
	Northeast	North Central	South	West	
Staff members don't have much school spirit	2.68	2.51	2.37	2.53	2.48
Student use of drugs/alcohol is well below aver.	3.34	3.31	3.59	3.51	3.46
Student tardiness/ absences are very prevalent	2.65	2.65	2.58	2.58	2.61
Student attitudes/ habits are not conducive to learning	2.34	2.19	2.20	2.08	2.20
This institution seems like a big family	2.94	3.03	3.26	3.08	3.12
There is very little cooperative effort among staff and among students	2.23	2.13	2.06	2.13	2.12
A very "positive" climate exists	3.27	3.44	3.65	3.54	3.52
Staff have many opportunities for inservice training	3.01	3.34	3.46	3.34	3.34

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210. Attitudinal scale ranges from 1 = Strongly disagree to 5 = Strongly agree. (see question 25)

TABLE A-109

STUDENT CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Gender				
--Female	49.61%	42.77%	47.98%	47.53%
--Male	49.95	57.17	52.01	52.32
Ethnicity				
--White	75.33%	80.01%	83.33%	78.04%
--Black	12.02	15.76	10.12	12.72
--Hispanic	7.13	2.43	2.58	5.01
--Other	5.18	1.79	3.55	3.96
Percentage of students that are handicapped	2.22%	3.53%	2.36%	2.61%
Percentage LEP	5.24%	3.60%	5.05%	4.80%
Percentage econ. disadvantaged	22.45%	29.28%	15.46%	23.06%
Percentage JTPA clients	5.33%	13.19%	1.74%	6.84%
Percentage single parents	14.10%	13.62%	7.32%	12.71%
Percentage students over 24	40.61%	38.14%	22.05%	36.48%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228.

TABLE A-110

STUDENT CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Gender					
--Female	50.02%	44.34%	49.78%	43.98%	47.43%
--Male	49.55	55.70	49.94	55.57	52.32
Ethnicity					
--White	86.94%	87.10%	72.49%	67.08%	78.04%
--Black	7.93	8.14	20.71	5.01	12.72
--Hispanic	2.86	1.89	4.93	12.03	5.01
--Other	1.92	2.44	1.70	13.73	3.96
Percentage of students that are handicapped	2.55%	2.38%	2.75%	2.69%	2.61%
Percentage LEP	3.97%	2.99%	4.50%	8.83%	4.80%
Percentage econ. disadvantaged	12.75%	26.35%	24.71%	24.12%	23.06%
Percentage JTPA clients	1.88%	8.90%	7.54%	6.86%	6.84%
Percentage single parents	7.42%	14.07%	12.52%	16.21%	12.71%
Percentage students over 24	27.21%	37.19%	34.61%	48.32%	36.48%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210.

TABLE A-111

VARIOUS PROGRAM CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Percentage of students that do not complete and--				
--leave program, but not school	11.67%	6.72%	9.43%	9.87%
--leave program and school	19.13%	21.07%	12.46%	18.43%
Percentage of students that did not intend to complete	13.29%	10.38%	5.83%	11.11%
Percentage of students that had previously left the institution and now returned	10.58%	8.89%	7.16%	9.57%
Percentage of institutions that ranked following goals as highest priority for program--				
--Place students in training related jobs	32.24%	42.17%	30.09%	34.62%
--Provide competencies needed to secure jobs	47.20	47.32	44.70	46.78
--Place students regardless of training-relatedness	2.51	2.15	2.31	2.37
--Enhance career awareness	7.34	7.25	8.76	7.58
--Provide opportunities for career exploration	16.67	21.88	16.13	18.01
--Help students develop work ethic	12.44	15.52	14.75	13.72
--Reinforce basic academic skills	8.58	7.55	9.26	8.42
--Promote access/equity	5.70	6.75	3.26	5.54
Percentage of programs that accept all students that apply	69.91%	54.65%	77.63%	67.08%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228.

TABLE A-112

VARIOUS PROGRAM CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Percentage of students that do not complete and--					
--leave program, but not school	9.29%	9.57%	9.45%	11.92%	9.87%
--leave program and school	14.02%	16.12%	20.46%	21.33%	18.43%
Percentage of students that did not intend to complete	4.18%	10.43%	12.29%	16.04%	11.11%
Percentage of students that had previously left the institution and now returned	6.15%	8.44%	10.40%	11.77%	9.57%
Percentage of institutions that ranked following goals as highest priority for program--					
--Place students in training related jobs	34.74%	36.45%	33.81%	33.33%	34.56%
--Provide competencies needed to secure jobs	36.98	45.48	49.29	51.98	46.79
--Place students regardless of training-relatedness	1.60	2.27	3.30	1.00	2.37
--Enhance career awareness	11.40	5.18	7.80	7.46	7.65
--Provide opportunities for career exploration	7.85	2.90	5.53	4.98	5.13
--Help students develop work ethic	15.10	11.54	10.48	11.39	13.70
--Reinforce basic academic skills	7.41	4.22	11.59	7.96	8.40
--Promote access/equity	5.85	2.30	8.06	4.02	5.53
Percentage of programs that accept all students that apply	69.39%	66.77%	69.53%	59.90%	67.14%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210.

TABLE A-113

COOPERATIVE EDUCATION CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Percentage of instructors that supervise coop. educ. for students and no. of students				
--No students	70.43%	71.86%	76.44%	71.93%
--1 or 2 students per grading period	10.06	11.08	9.78	10.29
--3+ students per grading period	19.51	17.07	13.77	17.77
Percentage of programs that do not require internship or coop	70.61%	78.99%	66.52%	72.18%
Where coop ed is required employer involvement in grading--				
--None	15.61%	13.00%	15.74%	14.90%
--Employer recommend	19.35	15.48	18.52	18.11
--Employer assign	3.74	2.79	4.17	3.55
--Employer and coordinators jointly assign	14.96	13.00	11.57	13.78

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228.

TABLE A-114

COOPERATIVE EDUCATION CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Percentage of instructors that supervise coop. educ. for students and no. of students					
--No students	75.00%	71.79%	72.55%	67.48%	71.90%
--1 or 2 students per grading period	6.00	8.02	12.03	14.07	10.35
--3+ students per grading period	19.00	20.19	15.43	18.45	17.75
Percentage of programs that do not require internship or coop	59.00%	71.75%	76.80%	74.16%	72.14%
Where coop ed is required employer involvement in grading--					
--None	13.51%	14.85%	14.41%	17.86%	14.97%
--Employer recommend	18.92	20.13	17.16	16.33	18.08
--Employer assign	5.95	1.98	4.24	2.55	3.63
--Employer and coordinators jointly assign	14.05	11.88	12.92	18.37	13.75

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210.

TABLE A-115

MEAN RATING OF THE INFLUENCE BUSINESS, INDUSTRY, AND LABOR HAVE ON VARIOUS ASPECTS OF PROGRAMS, BY TYPE OF INSTITUTION

Aspect	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Determining curriculum goals	3.27	3.50	2.83	3.25
Determining curriculum content	3.14	3.35	2.64	3.10
Assessing relevance of curriculum	3.33	3.60	2.77	3.30
Recommending programs to be offered	3.09	3.27	2.46	3.02
Providing learning or training sites	2.55	2.53	2.19	2.47
Identifying program changes needed due to technology	3.34	3.51	2.82	3.28
Providing equip/supplies	2.09	2.22	2.07	2.12
Affirmative action concerns	1.86	2.04	1.56	1.85
Mean number of times over past 3 years, instructors have--				
--Followed-up with employers about former students	1.23	1.76	1.02	1.34
--Followed-up with former students about program satisfaction	1.44	1.89	1.25	1.53
--Contacted employers to develop coop learning sites	0.92	0.91	0.79	0.90

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228. Influence rating ranges from 1 = Very little to 5 = Considerable. (see question 37)

TABLE A-116

MEAN RATING OF THE INFLUENCE BUSINESS, INDUSTRY, AND LABOR HAVE ON VARIOUS ASPECTS OF PROGRAMS, BY CENSUS REGION

Aspect	Region of the Country				Total
	Northeast	North Central	South	West	
Determining curriculum goals	3.02	3.32	3.23	3.42	3.25
Determining curriculum content	2.80	3.17	3.11	3.29	3.10
Assessing relevance of curriculum	3.04	3.28	3.30	3.56	3.30
Recommending programs to be offered	2.64	3.03	3.07	3.26	3.02
Providing learning or training sites	2.55	2.48	2.44	2.48	2.47
Identifying program changes needed due to technology	2.93	3.40	3.26	3.50	3.28
Providing equip/supplies	2.09	2.19	2.06	2.17	2.12
Affirmative action concerns	1.68	1.90	1.81	1.82	1.85
Mean number of times over past 3 years, instructors have--					
--Followed-up with employers about former students	1.13	1.22	1.49	1.34	1.34
--Followed-up with former students about program satisfaction	1.32	1.52	1.64	1.48	1.53
--Contacted employers to develop coop learning sites	0.87	0.85	0.91	0.94	0.90

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210. Influence rating ranges from 1 = Very little to 5 = Considerable. (see question 37)

TABLE A-117

MISCELLANEOUS CHARACTERISTICS ABOUT PROGRAM CONTENT AND RESOURCES, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Percentage of instructors that report equipment and materials are--				
--Very current	34.70%	41.89%	41.70%	37.97%
--Current but not the latest	44.85	43.36	40.36	43.62
--Somewhat dated, not outmoded	16.36	13.27	16.59	15.55
--Outmoded	4.09	1.47	1.35	2.86
Percentage of instructors that report that individualized instruction is--				
--Not integral in program	18.17%	6.57%	24.22%	16.08%
--Integral when learning basic concepts	14.96	7.16	11.21	12.12
--Integral when practicing skills	34.20	35.52	39.01	35.45
--Integral in all aspects	32.67	50.75	25.56	36.36
Percentage of instructors that report institution offers--				
--Developmental reading	91.56%	81.82%	83.78%	87.46%
--Developmental math	92.92%	85.20%	86.94%	89.69%
--Pre-tech courses	47.00%	48.77%	44.39%	47.02%
--Individualized counseling	79.02%	74.55%	78.54%	77.68%
--Special tutoring	88.17%	67.27%	86.04%	82.04%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228.

TABLE A-118

MISCELLANEOUS CHARACTERISTICS ABOUT PROGRAM CONTENT AND RESOURCES, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Percentage of instructors that report equipment and materials are--					
--Very current	36.68%	41.31%	38.35%	32.54%	37.91%
--Current but not the latest	42.71	43.40	44.78	41.63	43.55
--Somewhat dated, not outmoded	18.59	11.95	13.86	22.49	15.60
--Outmoded	2.01	3.14	3.01	3.35	2.94
Percentage of instructors that report that individualized instruction is--					
--Not integral in program	17.17%	18.30%	14.40%	15.46%	16.05%
--Integral when learning basic concepts	13.64	11.99	11.76	11.59	12.10
--Integral when practicing skills	34.34	35.65	33.67	40.10	35.39
--Integral in all aspects	34.85	34.07	40.16	32.85	36.46
Percentage of instructors that report institution offers--					
--Developmental reading	81.96%	86.54%	88.82%	90.87%	87.48%
--Developmental math	85.94%	88.46%	90.26%	93.75%	89.71%
--Pre-tech courses	40.64%	46.71%	46.93%	53.33%	46.94%
--Individualized counseling	76.56%	75.48%	77.34%	83.17%	77.72%
--Special tutoring	85.35%	82.37%	77.66%	88.41%	81.99%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210.

TABLE A-119

INSTRUCTOR CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Mean age	45.18	44.89	45.68	45.19
Gender--				
--Females	36.95%	28.65%	31.28%	33.60%
--Males	63.05	71.35	68.72	66.40
Ethnicity--				
--Black	4.38%	4.73%	5.38%	4.66%
--White	90.03	91.72	91.48	90.76
--Native Amer.	0.30	0.00	0.90	0.33
--Asian	2.11	0.59	1.79	1.64
--Hispanic	2.27	1.18	0.00	1.55
--Other	0.19	1.78	0.45	1.06
Highest level of education--				
--High school	1.51%	6.19%	0.88%	2.69%
--Some college	6.49	20.94	3.08	9.85
--Associate's	9.80	9.14	2.64	8.30
--Bachelor's	6.49	15.04	3.08	8.22
--Some grad.	14.78	19.47	7.49	14.73
--Master's	17.19	12.09	22.91	16.84
--Master's +	36.95	15.63	33.92	30.51
--Doctorate	6.79	1.47	25.99	8.87
Mean length in current job (months)	110.66	102.35	103.73	106.96
Mean salary	$32,458	$28,365	$26,576	$30,200
Percentage covered by collective bargaining	43.58%	37.83%	19.25%	37.33%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228.

TABLE A-120

INSTRUCTOR CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Mean age	46.38	44.77	44.48	46.41	45.19
Gender--					
--Females	35.47%	29.56%	36.71%	30.14%	33.55%
--Males	64.53	70.44	63.29	69.86	66.45
Ethnicity--					
--Black	1.00%	2.52%	8.62%	1.91%	4.65%
--White	96.00	95.58	86.57	88.04	90.69
--Native Amer.	0.00	0.63	0.20	0.48	0.33
--Asian	0.00	0.63	1.60	5.26	1.71
--Hispanic	0.00	0.00	2.40	3.35	1.55
--Other	3.00	0.63	0.60	0.96	1.06
Highest level of education--					
--High school	1.97%	4.42%	2.59%	0.96%	2.68%
--Some college	3.45	12.62	11.16	8.61	9.83
--Associate's	6.40	6.31	8.57	12.44	8.29
--Bachelor's	10.34	7.57	8.76	5.74	8.20
--Some grad.	12.81	17.67	11.95	18.66	14.70
--Master's	24.14	15.77	16.53	12.44	16.90
--Master's +	30.54	28.39	30.68	33.49	30.54
--Doctorate	10.34	7.26	9.76	7.66	8.85
Mean length in current job (months)	113.97	110.71	101.17	108.78	106.96
Mean salary	$26,866	$31,312	$28,646	$35,353	$30,200
Percentage covered by collective bargaining	65.38%	49.83%	10.62%	54.89%	37.26%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination instructor survey. Completed sample size is 1,239. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210.

TABLE A-121

STUDENT CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Mean Age	28.21	28.47	24.26	27.63
Gender				
--Female	53.74%	46.37%	54.20%	51.54%
--Male	46.26	53.63	45.80	48.46
Ethnicity				
--Black	9.02%	12.14%	8.72%	9.94%
--White	79.16	82.37	82.56	80.73
--Other	11.81	5.49	8.72	9.34
Marital status				
--Married	33.02%	33.66%	20.99%	31.18%
--Never married	53.56	52.00	71.71	56.15
--No longer married	13.41	14.34	7.30	12.67
With children, if ever married				
--No children	21.58%	20.25%	41.94%	23.32%
--Children	78.42	79.75	58.06	76.68
Percentage living independently	59.98%	60.96%	46.88%	58.06%
Percentage financially independent	66.84%	65.72%	44.84%	62.75%
Percentage with handicap	9.50%	11.20%	8.96%	9.90%
Mean household income	$20,160	$17,360	$23,250	$19,755

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for community and junior colleges is 1,733; technical institutes--1,027; and colleges and universities--563.

TABLE A-122

STUDENT CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Mean Age	26.14	27.11	27.00	31.16	27.63
Gender					
--Female	56.66%	46.42%	53.50%	50.26%	51.56%
--Male	43.34	53.58	46.50	49.74	48.44
Ethnicity					
--Black	4.47%	6.46%	16.88%	3.61%	9.95%
--White	87.08	88.70	76.64	72.46	80.65
--Other	8.35	7.84	6.49	23.93	9.39
Marital status					
--Married	20.48%	31.54%	31.40%	39.45%	31.18%
--Never married	69.09	56.31	56.32	44.25	56.15
--No longer married	10.44	12.16	12.29	16.30	12.67
With children, if ever married					
--No children	31.37%	20.26%	26.66%	17.70%	23.48%
--Children	68.62	79.73	73.34	82.30	76.53
Percentage living independently	47.43%	59.45%	54.97%	72.81%	58.12%
Percentage financially independent	55.05%	64.86%	59.39%	74.18%	62.76%
Percentage with handicap	8.15%	9.94%	9.76%	11.74%	9.90%
Mean household income	$23,625	$18,360	$19,395	$19,800	$19,755

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for the Northeast region is 510; North Center region--872; South--1,364; and West--584.

TABLE A-123

EDUCATIONAL BACKGROUND CHARACTERISTICS OF STUDENTS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Type of elementary/ middle school				
--Public	87.78%	90.47%	80.90%	87.43%
--Private-relig.	10.81	8.02	16.76	10.97
--Private-other	1.40	1.50	2.34	1.59
Type of high school				
--Public	91.44%	93.50%	84.99%	90.96%
--Private-relig.	6.83	4.57	12.66	7.14
--Private-other	1.74	1.93	2.35	1.90
Mean years since high school grad.	9.37	9.23	5.99	8.75
High school curriculum				
--General	49.82%	55.79%	40.04%	49.98%
--Academic/ college pre.	32.67	24.04	46.98	32.46
--Vocational	17.50	20.18	12.99	17.55
Mean grade point average in high school	2.89	2.77	3.09	2.89
Hours/week spent on homework in high school				
--Zero	5.90%	6.00%	4.63%	5.62%
--Less than 3	36.75	36.57	28.30	35.25
--3-5	31.04	29.11	29.89	30.25
--5+	26.50	38.31	37.19	28.88

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for community and junior colleges is 1,733; technical institutes--1,027; and colleges and universities--563.

TABLE A-124

EDUCATIONAL BACKGROUND CHARACTERISTICS OF STUDENTS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Type of elementary/ middle school					
--Public	79.36%	85.60%	91.60%	87.13%	87.37%
--Private-relig.	19.24	13.82	6.30	10.61	11.01
--Private-other	1.40	0.58	2.10	2.26	1.62
Type of high school					
--Public	84.14%	92.16%	92.97%	90.44%	90.95%
--Private-relig.	13.25	7.24	4.74	7.08	7.13
--Private-other	2.61	0.59	2.29	2.48	1.93
Mean years since high school grad.	7.75	8.17	8.07	12.03	8.75
High school curriculum					
--General	30.08%	56.07%	50.15%	57.51%	49.94%
--Academic/ college pre.	51.59	24.74	32.20	28.15	32.48
--Vocational	18.33	19.19	17.66	14.34	17.58
Mean grade point average in high school	2.95	2.81	2.92	2.87	2.89
Hours/week spent on homework in high school					
--Zero	4.98%	5.89%	5.32%	6.37%	5.60%
--Less than 3	31.68	41.11	32.92	35.00	35.24
--3-5	29.48	28.29	31.81	30.00	30.21
--5+	33.86	24.72	29.96	28.62	28.95

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for the Northeast region is 510; North Central region- -872; South--1,364; and West--584.

TABLE A-125

HIGH SCHOOL EXTRACURRICULAR ACTIVITY PARTICIPATION OF STUDENTS, BY TYPE OF INSTITUTION

Activity	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Percentage of students that participated in--				
--Varsity athletics	37.74%	31.95%	45.97%	37.43%
--Other athletics	40.64%	35.56%	46.41%	40.13%
--Cheerleading, pep club	21.72%	19.96%	27.25%	22.15%
--Drama	19.98%	16.26%	22.38%	19.29%
--Band, orchestra	40.16%	37.36%	42.40%	39.70%
--Hobby clubs	38.69%	34.12%	47.57%	38.86%
--Honorary clubs	17.72%	15.24%	30.50%	19.23%
--School newspaper, magazine, yearbook	22.48%	21.78%	32.26%	23.99%
--Student govt.	21.06%	17.19%	25.96%	20.76%
--Vocational club	31.96%	39.95%	33.47%	34.67%
--Youth organ. in community	50.72%	44.68%	58.86%	50.32%
--Junior Achieve.	10.02%	7.57%	11.13%	9.48%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for community and junior colleges is 1,733; technical institutes--1,027; and colleges and universities--563.

TABLE A-126

HIGH SCHOOL EXTRACURRICULAR ACTIVITY PARTICIPATION OF STUDENTS, BY CENSUS REGION

Activity	Region of the Country				Total
	Northeast	North Central	South	West	
Percentage of students that participated in--					
--Varsity athletics	38.15%	43.53%	33.63%	36.45%	37.46%
--Other athletics	44.61%	44.24%	34.19%	43.77%	40.19%
--Cheerleading, pep club	19.65%	20.98%	24.03%	21.60%	22.11%
--Drama	18.35%	21.34%	18.08%	19.93%	19.31%
--Band, orchestra	34.14%	43.48%	39.83%	38.91%	39.76%
--Hobby clubs	39.34%	34.31%	41.65%	39.03%	38.87%
--Honorary clubs	16.22%	16.26%	22.36%	18.96%	19.19%
--School newspaper, magazine, yearbook	25.43%	21.44%	26.10%	22.02%	24.03%
--Student govt.	17.30%	19.11%	22.40%	22.68%	20.80%
--Vocational club	15.11%	33.00%	47.54%	23.85%	34.66%
--Youth organ. in community	44.21%	50.56%	52.56%	49.73%	50.25%
--Junior Achieve.	6.35%	10.17%	10.20%	9.61%	9.50%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for the Northeast region is 510; North Central region--872; South--1,364; and West--584.

TABLE A-127

COLLEGE ADMISSION TEST CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Percentage of students that took SAT	43.03%	29.69%	54.68%	40.91%
Mean combined score	868	872	896	876
Percent that took ACT	37.60%	28.57%	50.19%	37.01%
Mean score	20.25	20.95	20.85	20.55

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for community and junior colleges is 1,733; technical institutes--1,027; and colleges and universities--563.

TABLE A-128

COLLEGE ADMISSION TEST CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Percentage of students that took SAT	64.63%	30.83%	39.45%	38.32%	40.98%
Mean combined score	872	896	868	886	876
Percent that took ACT	19.12%	47.61%	38.52%	32.12%	36.97%
Mean score	22.44	21.40	19.15	22.72	20.55

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for the Northeast region is 510; North Central region--872; South--1,364; and West--584.

TABLE A-129

STUDENTS' CURRENT EDUCATION CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Mean number of prior grading periods attended	3.40	3.18	4.80	3.57
Percentage of students mentioning following factors as one of four most important factors in choosing institution--				
--Prior school guidance coun.	11.77%	10.61%	15.28%	12.01%
--Catalog	29.83%	24.83%	30.20%	28.35%
--Parent's advice	23.83%	21.23%	34.81%	24.89%
--Prior school teacher	9.81%	10.13%	12.26%	10.32%
--Location	76.75%	64.95%	75.31%	72.86%
--Friend/acquaintance	39.99%	44.01%	47.60%	42.52%
--Reputation for training	42.30%	49.56%	54.88%	46.67%
--Reputation for placement	20.66%	35.05%	21.85%	25.31%
--Cost	59.78%	54.92%	43.69%	55.55%
--Financial aid	27.47%	26.29%	23.09%	26.36%
--Only institution in state for program desired	11.77%	12.27%	14.92%	12.46%
Percentage of students considered by institution to be--				
--Full-time	73.18%	80.02%	85.48%	77.38%
--Part-time	24.65	15.96	13.62	20.10
--Unknown	2.17	3.92	0.90	2.49
Mean credit hours enrolled in now	13.02	17.59	13.80	14.06
Mean credit hours planned for year	30.57	43.82	33.64	33.61

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228.

TABLE A-130

STUDENTS' CURRENT EDUCATION CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Mean number of prior grading periods attended	2.92	3.50	3.88	3.57	3.57
Percentage of students mentioning following factors as one of four most important factors in choosing institution--					
--Prior school guidance coun.	19.02%	9.63%	13.05%	7.19%	12.04%
--Catalog	33.53%	26.61%	27.86%	28.25%	28.47%
--Parent's advice	27.45%	23.28%	28.23%	17.47%	24.92%
--Prior school teacher	9.52%	10.00%	11.07%	10.10%	10.33%
--Location	71.18%	74.89%	70.45%	76.88%	72.85%
--Friend/acquaintance	36.47%	42.55%	46.55%	38.36%	42.52%
--Reputation for training	44.31%	50.46%	45.09%	46.58%	46.64%
--Reputation for placement	23.33%	30.73%	25.51%	18.49%	25.32%
--Cost	54.71%	53.67%	55.57%	58.39%	55.44%
--Financial aid	19.61%	31.42%	27.49%	21.75%	26.31%
--Only institution in state for program desired	15.29%	12.04%	11.00%	13.87%	12.43%
Percentage of students considered by institution to be--					
--Full-time	78.37%	78.47%	81.23%	65.98%	77.37%
--Part-time	18.57	18.63	17.34	30.05	20.12
--Unknown	3.06	2.89	1.35	3.97	2.48
Mean credit hours enrolled in now	15.81	13.88	14.26	12.50	14.06
Mean credit hours planned for year	29.54	35.41	36.81	28.30	33.61

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210.

TABLE A-131

STUDENT PROGRESS CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Percentage of students taking--				
--Developmental English	39.45%	34.50%	44.44%	38.84%
--Developmental Math	36.50%	44.61%	38.12%	39.27%
--A course on how to study	12.48%	11.49%	14.53%	12.55%
--Pre-tech course	11.64%	8.71%	17.47%	11.79%
--Career awareness course	28.35%	44.64%	23.03%	32.44%
Mean grade point average	3.37	3.44	3.14	3.35
Mean hours/week preparing for course	6.16	8.57	6.15	6.90
Percentage of students--				
--That spend more time on this course	39.68%	42.71%	33.09%	39.45%
--That spend about the same	43.09	37.25	49.82	42.50
--That spend less time	12.45	8.39	14.55	11.59
--Don't know	4.79	11.65	2.55	6.46
Percentage of students working on--				
--Voc. certif.	17.91%	63.69%	5.28%	29.74%
--Associate's	65.81	21.85	44.44	48.68
--Bachelor	5.35	0.92	47.54	11.26
--Other	3.31	6.56	1.64	4.02
--No degree	7.63	6.97	1.09	6.30
Percentage of students wanting--				
--Voc. certif.	9.54%	43.66%	2.55%	18.60%
--Associate's	29.80	15.77	15.52	23.07
--Bachelor/Master/Ph.D.	47.82	22.97	74.46	45.01
--Other	3.62	6.86	3.54	4.58
--No degree	9.21	10.74	3.93	8.75
Percentage of students who intend to complete	92.49%	96.86%	94.95%	94.26%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228. student survey. Completed sample size was 3,330.

TABLE A-132

STUDENT PROGRESS CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Percentage of students taking--					
--Developmental English	37.71%	37.82%	41.74%	34.84%	38.88%
--Developmental Math	33.47%	39.57%	42.91%	35.15%	39.25%
--A course on how to study	11.28%	10.93%	14.51%	11.61%	12.54%
--Pre-tech course	12.80%	10.35%	11.68%	13.22%	11.78%
--Career awareness course	22.72%	36.98%	32.66%	33.82%	32.50%
Mean grade point average	3.31	3.35	3.34	3.41	3.35
Mean hours/week preparing for course	5.94	6.70	7.32	7.07	6.90
Percentage of students--					
--That spend more time on this course	35.02%	40.38%	40.98%	38.64%	39.52%
--That spend about the same	44.73	41.94	41.44	43.77	42.47
--That spend less time	15.19	10.51	11.31	10.68	11.57
--Don't know	5.06	7.17	6.27	6.94	6.44
Percentage of students working on--					
--Voc. certif.	16.05%	34.89%	31.35%	29.84%	29.68%
--Associate's	62.14	45.20	46.30	47.25	48.59
--Bachelor	12.76	9.35	13.65	8.17	11.43
--Other	2.47	4.32	4.88	2.84	4.01
--No degree	6.58	6.24	3.81	11.90	6.29
Percentage of students wanting--					
--Voc. certif.	8.74%	21.11%	21.54%	16.40%	18.58%
--Associate's	19.96	21.89	22.72	28.20	23.02
--Bachelor/ Master/Ph.D.	58.97	40.29	45.09	40.20	45.10
--Other	4.04	6.61	4.19	2.80	4.57
--No degree	8.30	10.10	6.45	12.40	8.73
Percentage of students who intend to complete	95.24%	95.37%	93.57%	93.24%	94.24%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210.

TABLE A-133

CO-CURRICULAR ACTIVITIES OF STUDENTS, BY TYPE OF INSTITUTION

Activity	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Percentage of students that participate in--				
--Varsity athletics	6.88%	5.58%	8.92%	6.83
--Other athletics	15.77%	14.74%	22.45%	16.59
--Cheerleading, pep club, majorettes	1.53%	1.25%	3.04%	1.70
--Drama	3.12%	1.78%	4.53%	2.95
--Band, orchestra chorus, dance	6.74%	6.89%	13.15%	7.87
--Hobby clubs	15.02%	10.80%	19.84%	14.55
--Honorary clubs, societies	14.30%	11.42%	20.19%	14.41
--School newspaper, magazine yearbook	4.40%	3.47%	6.46%	4.62
--Student govt.	6.42%	6.49%	9.50%	6.96
Percentage of students that participate in an internship in coop. educ. program	14.48%	11.39%	12.84%	13.25
If in coop, mean hours/week	21.64	23.87	25.74	22.96
If in coop, percentage that receive credit	41.16	33.33	36.67	38.16
Mean number of individualized courses taken at institution	1.42	1.03	1.61	1.33

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for community and junior colleges is 1,733; technical institutes--1,027; and colleges and universities--563.

TABLE A-134

CO-CURRICULAR ACTIVITIES OF STUDENTS, BY CENSUS REGION

Activity	Region of the Country				Total
	Northeast	North Central	South	West	
Percentage of students that participate in--					
--Varsity athletics	7.59%	7.83%	7.01%	4.74%	6.89%
--Other athletics	19.32%	17.59%	14.99%	15.42%	16.60%
--Cheerleading, pep club, majorettes	1.47%	0.62%	2.30%	1.59%	1.70%
--Drama	3.43%	2.30%	3.17%	2.30%	2.95%
--Band, orchestra chorus, dance	7.11%	7.07%	8.48%	8.21%	7.86%
--Hobby clubs	13.69%	16.04%	14.00%	15.63%	14.525
--Honorary clubs, societies	13.57%	14.40%	17.66%	8.16%	14.39%
--School newspaper, magazine yearbook	3.56%	6.04%	5.45%	3.19%	4.64%
--Student govt.	7.75%	4.83%	7.65%	6.21%	6.98%
Percentage of students that participate in an internship in coop. educ. program	13.92%	18.62%	11.58%	11.54%	13.25%
If in coop, mean hours/week	26.99	23.73	21.38	19.78	22.96
If in coop, percentage that receive credit	44.44	43.79	32.44	37.20	38.12
Mean number of individualized courses taken at institution	4.11	0.58	1.02	0.74	1.33

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for community and junior colleges is 1,733; technical institutes--1,027; and colleges and universities--563.

TABLE A-135

MEAN STUDENT RATINGS OF ATTITUDINAL DATA ABOUT THE INSTITUTION, BY TYPE OF INSTITUTION

Attitude	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Course work is more difficult than in high school	3.00	2.66	3.29	2.95
The instructors care a lot about students	3.43	3.51	3.39	3.45
The students have a lot of school spirit	2.51	2.60	2.53	2.54
I had no idea how hard it would be when I entered	2.43	2.41	2.43	2.42
Library facilitates are good	3.12	2.73	3.04	2.99
Equipment is good	3.18	3.26	3.01	3.18
Institution doesn't place as many as they advertise	2.11	2.00	2.11	2.08

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228. Attitudinal scale ranges from 1 = Strongly disagree to 4 = Strongly agree. (see question 36)

TABLE A-136

MEAN STUDENT RATINGS OF ATTITUDINAL DATA ABOUT THE INSTITUTION, BY CENSUS REGION

Attitude	Region of the Country				Total
	Northeast	North Central	South	West	
Course work is more difficult than in high school	2.97	2.95	2.93	2.95	2.95
The instructors care a lot about students	3.40	3.41	3.48	3.49	3.45
The students have a lot of school spirit	2.43	2.55	2.56	2.57	2.54
I had no idea how hard it would be when I entered	2.43	2.45	2.43	2.38	2.42
Library facilitates are good	2.92	2.90	3.04	3.06	2.99
Equipment is good	3.03	3.19	3.21	3.22	3.18
stitution doesn't place as many as they advertise	2.03	2.12	2.08	2.04	2.08

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210. Attitudinal scale ranges from 1 = Strongly disagree to 4 = Strongly agree. (see question 36)

TABLE A-137

PRIOR POSTSECONDARY ATTENDANCE CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Percentage of students that attended another postsecondary institution	37.72%	34.79%	39.71%	37.16%
Prior institution type, if had attended--				
--Community or junior college	25.04%	22.45%	21.76%	23.69%
--Technical inst.	10.84	20.41	12.50	13.91
--College/univ.	45.45	41.98	51.39	45.53
--Other	18.67	15.15	14.35	14.86
Percentage of students that had attended another institution and received a degree	26.57%	25.73%	27.65%	26.53%
Type of degree for those that rec'd a prior degree--				
--Voc. Cert.	31.02%	39.60%	28.33%	33.05%
--Associates	24.60	22.77	50.00	28.45
--Bachelor's	26.20	20.79	16.67	22.99
--Graduate	6.95	4.95	0.00	5.17
--Other	1.60	4.95	0.00	2.30

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228.

TABLE A-138

PRIOR POSTSECONDARY ATTENDANCE CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Percentage of students that attended another postsecondary institution	36.51%	33.84%	35.20%	47.31%	37.17%
Prior institution type, if had attended--					
--Community or junior college	22.78%	22.65%	23.58%	25.38%	23.63%
--Technical inst.	10.55	14.29	17.69	9.09	13.87
--College/univ.	47.78	43.21	43.89	49.62	45.58
--Other	18.89	19.86	14.85	15.91	16.91
Percentage of students that had attended another institution and received a degree	34.44%	28.03%	23.26%	25.00%	26.48%
Type of degree for those that rec'd a prior degree--					
--Voc. Cert.	23.08%	38.20%	33.61%	34.21%	32.95%
--Associates	27.69	25.84	32.77	26.32	28.65
--Bachelor's	29.23	20.22	20.17	25.00	22.92
--Graduate	12.31	3.37	2.52	5.26	5.16
--Other	0.00	2.25	4.20	1.32	2.29

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210.

TABLE A-139

MILITARY SERVICE CHARACTERISTICS OF STUDENTS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Percentage of students having military service	12.96%	15.85%	8.68%	13.12%
If in service, mean weeks of--				
--Formal school training	15.11	12.62	13.42	13.93
--OJT	9.71	10.82	14.02	10.56
If in service, percentage of students reporting that training was--				
--Not related to current educ.	61.40%	66.21%	56.52%	62.56%
--Somewhat related	16.28	15.86	23.91	17.00
--Related	9.77	7.59	8.70	8.87
--Very related	12.56	10.34	10.87	11.58

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228.

TABLE A-140

MILITARY SERVICE CHARACTERISTICS OF STUDENTS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Percentage of students having military service	9.80%	11.66%	13.16%	18.32%	13.16%
If in service, mean weeks of--					
--Formal school training	12.10	11.02	16.03	14.05	13.93
--OJT	10.57	8.48	10.23	13.08	10.56
If in service, percentage of students reporting that training was--					
--Not related to current educ.	68.75%	57.45%	59.64%	70.00%	62.75%
--Somewhat related	18.75	14.89	20.48	12.00	16.91
--Related	4.17	13.83	6.63	10.00	8.82
--Very related	8.33	13.83	13.25	8.00	11.52

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210.

TABLE A-141

CURRENT EMPLOYMENT CHARACTERISTICS, BY TYPE OF INSTITUTION

Characteristic	Institution Type			Total
	Community and Junior Colleges	Technical Institutes	Colleges and Universities	
Percentage of students currently employed	59.87%	47.78%	60.43%	56.23%
If employed, mean number of months at this job	32.53	32.56	28.13	31.68
Mean hours work/week	26.79	27.55	24.05	26.50
Mean hourly wage	$ 5.97	$ 5.81	$ 5.25	$ 5.79
Relatedness of job to education--				
--Not at all	37.76%	46.17%	34.53%	39.39%
--Somewhat	18.98	15.94	21.02	18.55
--Related	14.26	12.42	14.41	13.80
--Very related	29.01	25.47	30.03	28.26
Percentage of students working where employer knows of education	98.32%	96.25%	99.70%	98.02%
Percentage of employers that accommodate school schedule	83.83%	86.77%	92.62%	86.23%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for community and junior colleges is 665; technical institutes--344; and colleges and universities--228.

TABLE A-142

CURRENT EMPLOYMENT CHARACTERISTICS, BY CENSUS REGION

Characteristic	Region of the Country				Total
	Northeast	North Central	South	West	
Percentage of students currently employed	64.43%	56.79%	53.23%	55.36%	56.26%
If employed, mean number of months at this job	32.38	31.12	26.92	41.95	31.68
Mean hours work/week	24.21	27.32	26.56	27.39	26.50
Mean hourly wage	$ 6.34	$ 5.50	$ 5.33	$6.77	$ 5.79
Relatedness of job to education--					
--Not at all	40.92%	36.70%	42.05%	35.33%	39.28%
--Somewhat	17.85	17.32	18.57	21.14	18.55
--Related	15.08	15.05	12.52	13.25	13.76
--Very related	26.15	30.93	26.86	30.28	28.40
Percentage of students working where employer knows of education	96.56%	99.18%	97.74%	98.10%	97.97%
Percentage of employers that accommodate school schedule	86.47%	87.66%	86.89%	82.52%	86.26%

NOTE: Data from Postsecondary Occupational Education Delivery: An Examination student survey. Completed sample size was 3,330. Sample size for the Northeast region is 204; the North Central region--319; South--506; and West--210.

APPENDIX B

UNIVERSE OF PUBLIC AND INDEPENDENT INSTITUTIONS OFFERING POSTSECONDARY OCCUPATIONAL EDUCATION

(Sample Denoted)

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---------------------------------- STATE=AK ----------------------------------

OBS   CITY        NAME                                           INSTITUTION   INS
                                                                 TYPE

  1   JUNEAU      ALASKA JUNEAU, UNIV OF                              3        NO
  2   SEWARD      ALASKA VOCATIONAL-TECHNICAL CENTER                  2        NO
  3   ANCHORAGE   ANCHORAGE CC                                        1        YES
  4   SITKA       ISLANDS CC                                          1        NO
  5   SOLDOTNA    KENAI PENINSULA CC                                  1        YES
  6   KETCHIKAN   KETCHIKAN CC                                        1        YES
  7   KODIAK      KODIAK CMTY COLLEGE                                 1        YES
  8   KOTZEBUE    KOTZEBUE TECHNICAL CENTER NW ARCTIC SCH             1        YES
  9   KOTZEBUE    KOTZEBUE TECHNICAL CENTER NW ARCTIC SCHO            1        NO
 10   BETHEL      KUSKOKWIM CC                                        1        NO
 11   PALMER      MATANUSKA-SUSITNA CC                                1        NO
 12   NOME        NORTHWEST CC                                        1        YES
 13   VALDEZ      PRINCE WILLIAM SOUND COMMUNITY COLLEGE              1        NO
 14   SITKA       SHELDON JACKSON COLLEGE                             3        NO
 15   FAIRBANKS   TANANA VALLEY CC                                    1        NO
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------------------------------- STATE=AL ---------------------------------------

OBS   CITY             NAME                                    INSTITUTION   INS
                                                               TYPE

 16   BIRMINGHAM       ALABAMA AT BIRMINGHAM,U                      3         NO
 17   MONTGOMERY       ALABAMA CHRISTIAN COLLEGE                    1         NO
 18   GADSDEN          ALABAMA TECHNICAL COLLEGE                    2         NO
 19   ALEXANDER CY     ALEXANDER CITY STATE JC                      1         NO
 20   ATMORE           ATMORE STATE TECHNICAL INSTITUTE             2         NO
 21   BESSEMER         BESSEMER ST TECH  COL                        2         NO
 22   FAYETTE          BREWER STATE JR COLLEGE                      1         YES
 23   TUSCALOOSA       C. A. FREDD STATE TECHNICAL COLLEGE          2         NO
 24   MOBILE           CARVER STATE TECHNICAL COLLEGE               2         NO
 25   PHENIX CITY      CHATTAHOOCHEE VALLEY CC                      1         NO
 26   EUFALA           CHAUNCEY SPARKS ST TECH                      2         YES
 27   OPP              DOUGLAS MACARTHUR ST TE C                    2         YES
 28   TALLADEGA        E H GENTRY TECHNICAL FACILITY                2         NO
 29   ENTERPRISE       ENTERPRISE ST JR COLLEGE                     1         YES
 30   BAY MINETTE      FAULKNER STATE JR COLLEGE                    1         YES
 31   HUNTSVILLE       FAULKNER UNIVERSITY-HUNTSVILLE               1         NO
 32   GADSDEN          GADSDEN STATE JR COLLEGE                     1         YES
 33   GADSDEN          GADSDEN STATE TECHNICAL INSTITUTE            2         NO
 34   DOTHAN           GEO C WALLACE ST CC-DOTHN                    1         NO
 35   HANCEVILLE       GEO C WALLACE ST CC-HANCE                    1         NO
 36   SELMA            GEO C WALLACE ST CC-SELMA                    1         NO
 37   ANNISTON         HARRY M AYERS ST TECH C                      2         NO
 38   THOMASVILLE      HOBSON STATE TECH C                          2         NO
 39   HUNTSVILLE       J F DRAKE ST TECH                            2         NO
 40   DEATSVILLE       J. F. INGRAM STATE TECHNICAL COLLEGE         2         NO
 41   BREWTON          JEFFERSON DAVIS STATE JC                     1         NO
 42   BIRMINGHAM       JEFFERSON ST JR COLLEGE                      1         NO
 43   DECATUR          JOHN C CALHOUN ST CC                         1         NO
 44   MONTGOMERY       JOHN M PATTERSON ST TECH                     2         NO
 45   BIRMINGHAM       LAWSON STATE CMTY COLLEGE                    1         NO
 46   LIVINGSTON       LIVINGSTON UNIVERSITY                        3         YES
 47   ANDALUSIA        LURLEEN B WALLACE ST JC                      1         YES
 48   OPP              MACAUTHUR STATE TECH COLLEGE                 2         NO
 49   MOBILE           MOBILE COLLEGE                               3         NO
 50   MUSCLE SHOALS    MUSCLE SHOALS ST TECH C                      2         YES
 51   CHILDERSBURG     N F NUNNELLY ST TECH C                       2         NO
 52   HAMILTON         N W ALA ST TECH COLLEGE                      2         YES
 53   RAINSVILLE       NTHEST ALA ST JR COLLEGE                     1         YES
 54   PHIL CAMPBELL    NTHWST ALA ST JR COLLEGE                     1         YES
 55   HUNTSVILLE       OAKWOOD COLLEGE                              3         NO
 56   OPELIKA          OPELIKA STATE TECHNICAL COLLEGE              2         YES
 57   MONROEVILLE      PATRICK HENRY STATE JC                       1         YES
 58   EVERGREEN        REID STATE TECHNICAL C                       2         YES
 59   MOBILE           S. D. BISHOP ST JC                           1         YES
 60   BIRMINGHAM       SAMFORD UNIVERSITY                           3         NO
 61   TUSCALOOSA       SHELTON ST CMTY COLLEGE                      1         YES
 62   BOAZ             SNEAD STATE JR COLLEGE                       1         NO
 63   OPELIKA          SOUTHERN UNION ST JR COL OPELIKA CAM         1         NO
 64   TUSKEGEE         SOUTHERN VOCATIONAL COLLEGE                  2         NO
 65   MOBILE           SOUTHWEST ST TECH COL                        2         YES
 66   EUFALA           SPARKS STATE VOC-TECH SCHOOL                 2         NO
 67   WADLEY           STHN UNION ST JR COLLEGE                     1         YES
 68   MONTGOMERY       TROY STATE U MONTGOMERY                      3         NO
 69   TROY             TROY STATE UNIV MAIN CAM                     3         YES
 70   SUMITON          WALKER STATE TECH C                          2         YES
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OBS  CITY             NAME                                          INSTITUTION  INS
                                                                    TYPE

 71  LITTLE ROCK      ARK AT LITTLE ROCK,U OF                            3       NO
 72  LITTLE ROCK      ARK MEDL SCI CAMPUS,U OF                           3       NO
 73  PINE BLUFF       ARKANSAS PINE BLUFF,U OF                           3       NO
 74  BEEBE            ARKANSAS STATE U BEEBE BR                          1       YES
 75  STATE UNIV       ARKANSAS STATE U MAIN CAM                          3       YES
 76  RUSSELLVILLE     ARKANSAS TECH UNIVERSITY                           3       NO
 77  OZARK            ARKANSAS VALLEY VOCATIONAL-TECHNICAL SCH           2       NO
 78  MONTICELLO       ARKANSAS-MONTICELLO,U OF                           1       NO
 79  POCAHONTAS       BLACK RIVER VOCATIONAL-TECHNICAL SCHOOL            2       YES
 80  CONWAY           CENTRAL ARKANSAS,U OF                              3       NO
 81  CONWAY           CENTRAL BAPTIST COLLEGE                            1       NO
 82  DE QUEEN         COSSATOT VOCATIONAL-TECHNICAL SCHOOL               2       NO
 83  BURDETTE         COTTON BOLL VOCATIONAL-TECHNICAL SCHOOL            2       YES
 84  FORREST CITY     CROWLEY'S RIDGE VOCATIONAL-TECHNICAL SCH           2       NO
 85  MARKED TREE      DELTA VOCATIONAL-TECHNICAL SCHOOL                  2       NO
 86  FOREST CITY      EAST ARK CMTY COLLEGE                              1       YES
 87  SEARCY           FOOTHILLS VOCATIONAL-TECHNICAL SCHOOL              2       NO
 88  CROSSETT         FOREST ECHOES VOCATIONAL-TECHNICAL SCHOO           2       NO
 89  HOT SPRINGS      GARLAND CO CMTY COLLEGE                            1       YES
 90  BATESVILLE       GATEWAY VOC-TECH SCHOOL                            2       NO
 91  MC GEHEE         GREAT RIVERS VOCATIONAL-TECHNICAL SCHOO            2       YES
 92  MC GEHEE         GREAT RIVERS VOCATIONAL-TECHNICAL SCHOOL           2       NO
 93  SEARCY           HARDING U MAIN CAM                                 3       NO
 94  ARKADELPHIA      HENDERSON ST UNIVERSITY                            3       NO
 95  SILOAM SPG       JOHN BROWN UNIVERSITY                              3       NO
 96  WEST MEMPHIS     MID-SOUTH VO-TECH SCHOOL                           2       NO
 97  BLYTHEVILLE      MISS CO CMTY COLLEGE                               1       YES
 98  HARRISON         NORTH ARKANSAS CC                                  1       YES
 99  SPRINGDALE       NORTHWEST VOCATIONAL SCHOOL                        2       NO
100  EL DORADO        OIL BELT VOCATIONAL-TECHNICAL SCHOOL               2       NO
101  MALVERN          OUACHITA VOCATIONAL-TECHNICAL SCHOOL               2       NO
102  MELBOURNE        OZARKA VOCATIONAL-TECHNICAL SCHOOL                 2       NO
103  MORRILTON        PETIT JEAN VOCATIONAL-TECHNICAL SCHOOL             2       YES
104  HELENA           PHILLIPS CO CMTY COLLEGE                           1       NO
105  PINE BLUFF       PINES VOCATIONAL-TECHNICAL SCHOOL                  2       NO
106  N LITTLE ROCK    PULASKI VOCATIONAL TECHNICAL SCHOOL                2       YES
107  HOT SPRINGS      QUAPAW VOCATIONAL-TECHNICAL SCHOOL                 2       NO
108  HOPE             RED RIVER VOCATIONAL-TECHNICAL SCHOOL              2       NO
109  DEWITT           RICE BELT VOC TECH SCH                             2       YES
110  MENA             RICH MOUNTAIN CC                                   2       NO
111  N LITTLE ROCK    SHORTER COLLEGE                                    1       NO
112  WALNUT RIDGE     SOUTHERN BAPTIST COLLEGE                           1       YES
113  EL DORADO        STHN ARK U EL DORADO BR                            3       NO
114  MAGNOLIA         STHN ARK U MAIN CAMPUS                             3       YES
115  CAMDEN           STHN ARK U TECH BRANCH                             1       NO
116  HARRISON         TWIN LAKES VOCATIONAL-TECHNICAL SCHOOL             2       YES
117  FORT SMITH       WESTARK COMMUNITY COLLEGE                          1       NO
118  NEWPORT          WHITE RIVER VOCATIONAL-TECHNICAL SCHOOL            2       NO
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   OBS     CITY           NAME                          INSTITUTION     INS
                                                        TYPE

   119     YUMA           ARIZONA WESTERN COLLEGE            1          NO
   120     COOLIDGE       CENTRAL ARIZONA COLLEGE            1          YES
   121     WINKELMAN      CENTRAL ARIZONA COLLEGE            1          NO
   122     DOUGLAS        COCHISE COLLEGE                    1          NO
   123     THATCHER       EASTERN ARIZONA COLLEGE            1          NO
   124     GANADO         GANADO,COLLEGE OF                  1          NO
   125     GLOBE          GILA PUEBLO COLLEGE                1          YES
   126     GLENDALE       GLENDALE CMTY COLLEGE              1          NO
   127     PHOENIX        MARICOPA TECH CC                   1          YES
   128     MESA           MESA COMMUNITY COLLEGE             1          NO
   129     RIVIERS        MOHAVE COMMUNITY COLLEGE           1          YES
   130     LAKE HAVASU    MOHAVE COMMUNITY COLLEGE           1          YES
   131     LAKE HAVASU    MOHAVE COMMUNITY COLLEGE           1          NO
   132     TSAILE         NAVAJO COMMUNITY COLLEGE           1          YES
   133     HOLBROOK       NORTHLAND PIONEER COLLEGE          1          YES
   134     PHOENIX        PHOENIX COLLEGE                    1          NO
   135     TUCSON         PIMA COMMUNITY COLLEGE             1          NO
   136     PHOENIX        RIO SALADO CC                      1          YES
   137     MESA           RIO SALADO CC-AREA EAST            1          NO
   138     SCOTTSDALE     SCOTTSDALE CMTY COLLEGE            1          NO
   139     PHOENIX        SOUTH MOUNTAIN CMTY C              1          NO
   140     PRESCOTT       YAVAPAI COLLEGE                    1          NO
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OBS	CITY	NAME	INSTITUTION TYPE	INS
141	ALAMEDA	ALAMEDA,COLLEGE OF	1	NO
142	SANTA MARIA	ALLAN HANCOCK COLLEGE	1	NO
143	SACRAMENTO	AMERICAN RIVER COLLEGE	1	NO
144	LANCASTER	ANTELOPE VALLEY COLLEGE	1	NO
145	BAKERSFIELD	BAKERSFIELD COLLEGE	1	YES
146	BARSTOW	BARSTOW COLLEGE	1	YES
147	OROVILLE	BUTTE COLLEGE	1	YES
148	APTOS	CABRILLO COLLEGE	1	NO
149	REDWOOD CITY	CANADA COLLEGE	1	NO
150	VALENCIA	CANYONS,COLLEGE OF THE	1	NO
151	LAKE VIEW TERR	CASA LOMA COLLEGE	1	NO
152	NORWALK	CERRITOS COLLEGE	1	NO
153	RIDGECREST	CERRO COSO CMTY COLLEGE	1	YES
154	LIVERMORE	CHABOT VALLEY CAMPUS	1	YES
155	ALTA LOMA	CHAFFEY COMMUNITY COLL	1	NO
156	ORANGE	CHAPMAN COLLEGE	1	YES
157	GLENDORA	CITRUS COLLEGE	3	NO
158	AZUSA	CITRUS COLLEGE	1	NO
159	SAN FRANCISCO	CITY COLLEGE OF SAN FRANCISCO	1	NO
160	FOUNTAIN VLY	COASTLINE CMTY COLLEGE	1	YES
161	SAN DIEGO	COLEMAN COLLEGE	1	YES
162	COLUMBIA	COLUMBIA C-COLUMBIA	3	NO
163	COMPTON	COMPTON CMTY COLLEGE	1	NO
164	SAN PABLO	CONTRA COSTA COLLEGE	1	YES
165	SACRAMENTO	COSUMNES RIVER COLLEGE	1	NO
166	YUCAIPA	CRAFTON HILLS COLLEGE	1	NO
167	SN LUIS OBSIO	CUESTA COLLEGE	1	NO
168	EL CAJON	CUYAMACA COLLEGE	1	NO
169	CYPRESS	CYPRESS COLLEGE	3	YES
170	DAVIS	D-Q UNIVERSITY	1	NO
171	CUPERTINO	DE ANZA COLLEGE	1	NO
172	PALM DESERT	DESERT,COLLEGE OF THE	1	NO
173	PLEASANT HILL	DIABLO VALLEY COLLEGE	1	NO
174	ROSEMEAD	DON BOSCO TECHNICAL INST	1	NO
175	MONTEREY PARK	EAST LOS ANGELES COLLEGE	1	NO
176	TORRANCE	EL CAMINO COLLEGE	1	NO
177	SAN JOSE	EVERGREEN VALLEY COLLEGE	1	NO
178	QUINCY	FEATHER RIVER COLLEGE	1	YES
179	LOS ALTOS HLS	FOOTHILL COLLEGE	1	YES
180	FRESNO	FRESNO CITY COLLEGE	1	YES
181	FRESNO	FRESNO CITY COLLEGE VOCATIONAL TRAINING	1	NO
182	FULLERTON	FULLERTON COLLEGE	1	YES
183	GILROY	GAVILAN COLLEGE	1	NO
184	GLENDALE	GLENDALE CMTY COLLEGE	1	NO
185	HUNTINGTN BCH	GOLDEN WEST COLLEGE	1	NO
186	EL CAJON	GROSSMONT COLLEGE	1	NO
187	SAN PEDRO	HARBOR OCCUPATIONAL CENTER	1	NO
188	SALINAS	HARTNELL COLLEGE	2	NO
189	STOCKTON	HUMPHREYS COLLEGE	1	YES
190	IMPERIAL	IMPERIAL VALLEY COLLEGE	1	YES
191	NOVATO	INDIAN VALLEY COLLEGES	1	YES
192	SAN FRANCISCO	JOHN A. O'CONNELL COMMUNITY COLLEGE	1	YES

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---------------------------------- STATE=CA ----------------------------------

OBS  CITY              NAME                                           INSTITUTION  INS
                                                                      TYPE

193  SAN FRANCISCO     JOHN ADAMS COMMUNITY COLLEGE CENTER                     1   YES
194  REEDLEY           KINGS RIVER CMTY COLLEGE                                1   NO
195  LAGUNA BEACH      LAGUNA BEACH U.S.I.                                     3   NO
196  S LAKE TAHOE      LAKE TAHOE CMTY COLLEGE                                 1   YES
197  OAKLAND           LANEY COLLEGE                                           1   NO
198  SUSANVILLE        LASSEN COLLEGE                                          1   NO
199  LOMA LINDA        LOMA LINDA UNIVERSITY                                   3   YES
200  LONG BEACH        LONG BEACH CITY COLLEGE                                 1   YES
201  WILMINGTON        LOS ANG HARBOR COLLEGE                                  1   YES
202  WOODLAND HLS      LOS ANG PIERCE COLLEGE                                  1   NO
203  LOS ANGELES       LOS ANG SOUTHWEST COLLEGE                               1   YES
204  LOS ANGELES       LOS ANG TR TECH COLLEGE                                 1   YES
205  VAN NUYS          LOS ANG VALLEY COLLEGE                                  1   YES
206  LOS ANGELES       LOS ANGELES AIRPORT COLLEGE CENTER                       1   NO
207  LOS ANGELES       LOS ANGELES CITY COLLEGE                                1   NO
208  LOS ANGELES       LOS ANGELES METRO C                                     1   NO
209  SAN FERNANDO      LOS ANGELES MISSION C                                   1   YES
210  PITTSBURG         LOS MEDANOS COLLEGE                                     1   NO
211  KENTFIELD         MARIN,COLLEGE OF                                        1   YES
212  UKIAH             MENDOCINO COLLEGE                                       1   NO
213  MERCED            MERCED COLLEGE                                          1   NO
214  OAKLAND           MERRITT COLLEGE                                         1   YES
215  MODESTO           MID-STATE COLLEGE                                       1   NO
216  OCEANSIDE         MIRA COSTA COLLEGE                                      1   NO
217  SANTA CLARA       MISSION COLLEGE                                         1   NO
218  MODESTO           MODESTO JUNIOR COLLEGE                                  1   NO
219  MONTEREY          MONTEREY PEN COLLEGE                                    1   NO
220  MOORPARK          MOORPARK COLLEGE                                        1   NO
221  WALNUT            MOUNT SAN ANTONIO COLLEGE                               1   YES
222  SAN JACINTO       MT SAN JACINTO COLLEGE                                  1   NO
223  NAPA              NAPA VALLEY COLLEGE                                     1   YES
224  SAN DIEGO         NATIONAL UNIVERSITY                                     3   NO
225  NORTH HOLYWOOD,   NORTH ORANGE COUNTRY COMMUNITY COLLEGE D                1   NO
226  INGLEWOOD         NORTHROP UNIVERSITY                                     3   NO
227  FREMONT           OHLONE COLLEGE                                          1   YES
228  COSTA MESA        ORANGE COAST COLLEGE                                    1   NO
229  OXNARD            OXNARD COLLEGE                                          1   YES
230  FULLERTON         PACIFIC CHRISTIAN COLLEGE                               3   NO
231  ANGWIN            PACIFIC UNION COLLEGE                                   3   YES
232  BLYTHE            PALO VERDE COLLEGE                                      1   NO
233  SAN MARCOS        PALOMAR COLLEGE                                         1   YES
234  PASADENA          PASADENA CITY COLLEGE                                   1   NO
235  PORTERVILLE       PORTERVILLE COLLEGE                                     1   NO
236  EUREKA            REDWOODS,COLLEGE OF THE                                 1   YES
237  REEDLEY           REEDLEY COLLEGE                                         1   NO
238  WHITTIER          RIO HONDO COLLEGE                                       1   NO
239  RIVERSIDE         RIVERSIDE CITY COLLEGE                                  1   NO
240  SACRAMENTO        SACRAMENTO CITY COLLEGE                                 1   YES
241  MISSION VIEJO     SADDLEBACK COLLEGE                                      1   NO
242  SAN DIEGO         SAN DIEGO CC DIST DIS OFF                               1   NO
243  SAN DIEGO         SAN DIEGO CITY COLLEGE                                  1   NO
244  SAN DIEGO         SAN DIEGO MESA COLLEGE                                  1   NO
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--------------------------------- STATE=CA ---------------------------------

OBS	CITY	NAME	INSTITUTION TYPE	INS
245	SAN DIEGO	SAN DIEGO MIRAMAR COLLEGE	1	NO
246	SAN FRANCISCO	SAN FRANCISCO COMMUNITY COLLEGE SKILLS C	1	NO
247	SAN FRANCISCO	SAN FRISCO CC DISTRICT	1	NO
248	STOCKTON	SAN JOAQUIN DELTA COLLEGE	1	NO
249	SAN JOSE	SAN JOSE CITY COLLEGE	1	YES
250	SAN MATEO	SAN MATEO,COLLEGE OF	1	NO
251	SANTA ANA	SANTA ANA COLLEGE	1	NO
252	SANTA BARBARA	SANTA BARBARA CTY COLLEGE	1	NO
253	SANTA MONICA	SANTA MONICA COLLEGE	1	YES
254	SANTA ROSA	SANTA ROSA JUNIOR COLLEGE	1	YES
255	VISALIA	SEQUOIAS,COLLEGE OF THE	1	NO
256	REDDING	SHASTA COLLEGE	1	NO
257	ROCKLIN	SIERRA COLLEGE	1	YES
258	WEED	SISKIYOUS,COLLEGE OF THE	1	NO
259	SACRAMENTO	SKILLS & BUSINESS EDUCATION CENTER	2	NO
260	SAN BRUNO	SKYLINE COLLEGE	1	YES
261	SN BERNARDINO	SN BERNARDINO VLY COLLEGE	1	YES
262	MORAGA	SNT MARY'S COLLEGE OF CAL	3	NO
263	SUISUN CITY	SOLANO COUNTY CC	1	NO
264	CHULA VISTA	SOUTHWESTERN COLLEGE	1	NO
265	TAFT	TAFT COLLEGE	1	NO
266	UKIAH	UKIAH ADULT SCH	2	YES
267	VENTURA	VENTURA COLLEGE	1	YES
268	BUENA PARK,	VETERAN REAL ESTATE SCHOOL	1	NO
269	VICTORVILLE	VICTOR VALLEY COLLEGE	1	NO
270	BERKELEY	VISTA COLLEGE	1	NO
271	FRESNO	WEST COAST CHRISTIAN C	3	NO
272	COALINGA	WEST HILLS COLLEGE	1	NO
273	CULVER CITY	WEST LOS ANGELES COLLEGE	1	YES
274	SARATOGA	WEST VALLEY COLLEGE	1	NO
275	LOS ANGELES	WOODBURY UNIVERSITY	3	NO
276	MARYSVILLE	YUBA COLLEGE	1	NO

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-------------------------------- STATE=CO ------------------------------------------

OBS  CITY            NAME                                       INSTITUTION  INS
                                                                TYPE

277  ALAMOSA         ADAMS STATE COLLEGE                             3       YES
278  GREELEY         AIMS COMMUNITY COLLEGE                          1       YES
279  LITTLETON       ARAPAHOE CMTY COLLEGE                           1       NO
280  BOULDER         BOULDER VALLEY AREA VOCATIONAL TECH CENT        2       NO
281  GLENWOOD SPG    COLORADO MOUNTAIN COLLEGE                       1       NO
282  LEADVILLE       COLORADO MOUNTAIN COLLEGE EAST CAMPUS           1       NO
283  STEAMBOAT SPGS  COLORADO MTN COLL-ALPINE CAMPUS                 1       NO
284  RANGELY         COLORADO NORTHWESTERN CC                        1       NO
285  AURORA          COMMUNITY COL OF AURORA                         2       NO
286  DELTA           DELTA-MONTROSE AREA VOCATIONAL-TECHNICAL        2       NO
287  DENVER          DENVER AURARIA CMTY COL                         1       NO
288  DENVER          EMILY GRIFFITH OPPORTUNITY SCHOOL               2       YES
289  DURANGO         FORT LEWIS COLLEGE                              3       YES
290  WESTMINSTER     FRONT RANGE CC                                  1       YES
291  LAMAR           LAMAR COMMUNITY COLLEGE                         1       NO
292  FORT COLLINS    LARIMER COUNTY VOCATIONAL TECHNICAL CENT        2       NO
293  GRAND JCT       MESA COLLEGE                                    3       YES
294  FORT MORGAN     MORGAN COMMUNITY COLLEGE                        1       NO
295  STERLING        NORTHEASTERN JR COLLEGE                         1       NO
296  LA JUNTA        OTERO JUNIOR COLLEGE                            1       YES
297  COLORADO SPG    PIKES PEAK CMTY COLLEGE                         1       NO
298  PUEBLO          PUEBLO COMMUNITY COLLEGE                        1       NO
299  GOLDEN          RED ROCKS CMTY COLLEGE                          1       YES
300  DENVER          REGIS COLLEGE                                   3       NO
301  CORTEZ          SAN JUAN BASIN AREA VOCATIONAL SCHOOL           2       NO
302  ALAMOSA         SAN LUIS VALLEY AREA VOCATIONAL SCHOOL          2       YES
303  PUEBLO          SOUTHERN COLORADO,U OF                          3       NO
304  AURORA          T.H. PICKENS TECHNICAL CENTER                   2       NO
305  TRINIDAD        TRINIDAD STATE JR COLLEGE                       1       YES
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OBS  CITY           NAME                                         INSTITUTION   INS
                                                                 TYPE

306  HARTFORD       AI PRINCE REG VOC TECH SCHOOL                    2         YES
307  ENFIELD        ASNUNTUCK CMTY COLLEGE                           1         YES
308  STAMFORD       BRIDGEPORT ENGINEERING INSTITUTE STAMFO          3         YES
309  STAMFORD       BRIDGEPORT ENGINEERING INSTITUTE STAMFOR         3         NO
310  BRIDGEPORT     BRIDGEPORT,UNIVERSITY OF                         3         NO
311  BRIDGEPORT     BULLARD-HAVENS REG VOC-TECH SCH                  2         NO
312  STORRS         CONNECTICUT, UNIV OF                             3         NO
313  NEW BRITAIN    E.C. GOODWIN REG VOC-TECH SCH                    2         NO
314  HAMDEN         ELI WHITNEY REG VOC-TECH SCHOOL                  2         NO
315  HARTFORD       GREATER HARTFORD CC                              1         YES
316  NORTH HAVEN    GREATER NEW HAVEN TECH C                         1         NO
317  MERIDEN        H.C. WILCOX REG. VOC-TECH SCH                    2         NO
318  DANIELSON      H.H. ELLIS REGIONAL VOC-TECH SCH                 2         NO
319  HARTFORD       HARTFORD ST TECH COLLEGE                         1         NO
320  WEST HARTFORD  HARTFORD,UNIVERSITY OF                           3         NO
321  DANBURY        HENRY ABBOTT REGIONAL VOC-TECH SCHOOL            2         NO
322  BRIDGEPORT     HOUSATONIC CMTY COL                              1         NO
323  ENFIELD        HOWELL CHENEY REGIONAL V-T SATELLITE SC          2         NO
324  MANCHESTER     HOWELL CHENEY REGIONAL VO-TECH SCHOOL            2         YES
325  STAMFORD       J.M. WRIGHT REG. VOC-TECH SCH                    2         NO
326  MANCHESTER     MANCHESTER CMTY COLLEGE                          1         NO
327  WATERBURY      MATTATUCK CMTY COLLEGE                           1         NO
328  NORWICH        MOHEGAN COMMUNITY COLLEGE                        1         YES
329  WEST HAVEN     NEW HAVEN,UNIVERSITY OF                          3         NO
330  NORWALK        NORWALK COMMUNITY COLLEGE                        1         NO
331  NORWALK        NORWALK ST TECH COLLEGE                          1         NO
332  NORWICH        NORWICH REG VOC-TECH SCH                         2         NO
333  WINSTED        NTHWSTN CONN CMTY COLLEGE                        1         NO
334  ANSONIA        OBRIEN REGIONAL V-T SCHOOL                       2         NO
335  TORRINGTON     OLIVER WOLCOTT REG VOC-TECH SCH                  2         NO
336  MILFORD        PLATT REGIONAL VOC-TECH SCHOOL                   2         YES
337  WATERBURY      POST COLLEGE                                     3         NO
338  DANIELSON      QUINEBAUG VALLEY CC                              1         NO
339  HAMDEN         QUINNIPIAC COLLEGE                               1         NO
340  BRIDGEPORT     SACRED HEART UNIVERSITY                          3         NO
341  NEW HAVEN      SOUTH CEN CMTY COLLEGE                           3         NO
342  NORWICH        THAMES VLY STATE TECH C                          1         NO
343  FARMINGTON     TUNXIS COMMUNITY COLLEGE                         1         NO
344  MIDDLETOWN     VINAL REGIONAL VOCATIONAL-TECHNICAL SCHO         1         YES
345  WATERBURY      W. F. KAYNOR REG VOC-TECH SCH                    2         NO
346  WATERBURY      WATERBURY ST TECH COLLEGE                        2         NO
347  WILLIMANTIC    WINDHAM REG VOC-TECH SCH                         1         NO
348  DANBURY        WSTN CT STATE UNIV                               2         NO
                                                                     3         YES

------------------------------------ STATE=DC ------------------------------------

OBS     CITY        NAME                                         INSTITUTION   INS
                                                                 TYPE

349  WASHINGTON     AMERICAN UNIVERSITY                              3         NO
350  WASHINGTON     DIST OF COLUMBIA, UNIV OF                        3         NO
351  WASHINGTON     HANNAH HARRISON CAREER SCH OF THE YWCA           2         YES
352  WASHINGTON     SOUTHEASTERN UNIVERSITY                          2         NO
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OBS      CITY        NAME                                          INSTITUTION   INS
                                                                   TYPE

353   GEORGETOWN   DEL TECH & CC STHN CAM                                1       YES
354   DOVER        DEL TECH & CC TERRY CAM                               1       YES
355   NEWARK       DEL TECH CC STAN-WILMGTN                              1       NO
356   WILMINGTON   DELAWARE TECH AND COMMUN COLL-WILMINGTO               2       YES
357   WILMINGTON   GOLDEY BEACOM COLLEGE                                 3       YES
358   DOVER        WESLEY COLLEGE                                        3       YES


-------------------------------- STATE=FL ------------------------------------

OBS  CITY               NAME                                          INSTITUTION  INS
                                                                      TYPE

359  COCONUT CREEK      ATLANTIC VOCATIONAL TECHNICAL CENTER                2       NO
360  FORT WALTON        BAY AREA VOCATIONAL TECHNICAL SCHOOL                2       YES
361  BOCA RATON         BOCA RATON, COLLEGE OF                              3       YES
362  STARKE             BRADFORD UNION AREA VOCATIONAL TECHNICA             2       YES
363  STARKE             BRADFORD UNION AREA VOCATIONAL TECHNICAL            2       NO
364  COCOA              BREVARD CMTY COLLEGE                                1       NO
365  FT LAUDERDALE      BROWARD CMTY COLLEGE                                1       NO
366  BLOUNTSTOWN        CALHOUN COUNTY INSTITUTE                            1       NO
367  OCALA              CENTRAL FLA CMTY COLLEGE                            1       NO
368  PORT CHARLOTTE     CHARLOTTE VOCATIONAL-TECHNICAL CENTER               2       YES
369  MARIANNA           CHIPOLA JUNIOR COLLEGE                              1       NO
370  NAPLES             COLLIER COUNTY VOCATIONAL-TECHNICAL CENT            2       NO
371  TAMPA              DAVE G ERWIN VOCATIONAL-TECHNICAL CENTE             2       YES
372  TAMPA              DAVE G ERWIN VOCATIONAL-TECHNICAL CENTER            2       NO
373  DAYTONA BEACH      DAYTONA BCH CMTY COLLEGE                            1       NO
374  FORT LAUDERDALE    DILLARD ADULT/COMMUNITY SCHOO                       2       NO
375  FORT MYERS         EDISON COMMUNITY COLLEGE                            1       YES
376  BUNNELL            EMBRY-RIDDLE AERON U                                3       NO
377  JACKSONVILLE       FLA JR COLLEGE JACKSONVL                            1       NO
378  MELBOURNE          FLORIDA INST TECHNOLOGY                             3       NO
379  KEY WEST           FLORIDA KEYS CMTY COLLEGE                           1       YES
380  GAINESVILLE        FLORIDA, UNIVERSITY OF                              3       NO
381  FORT LAUDERDALE    FORT LAUDERDALE COLLEGE                             3       YES
382  PENSACOLA          GEORGE STONE AREA VOCATIONAL CENTER                 1       NO
383  PANAMA CITY        GULF COAST CMTY COLLEGE                             1       NO
384  TAMPA              HILLSBOROUGH CMTY COLLEGE                           1       YES
385  PLANT CITY         HILLSBOROUGH COM COLLEGE PLANT CITY CAM             1       YES
386  PLANT CITY         HILLSBOROUGH COM COLLEGE PLANT CITY CAMP            1       NO
387  FORT PIERCE        INDIAN RIVER CMTY COLLEGE                           1       NO
388  JACKSONVILLE       JONES COLLEGE CENTRAL OFF                           3       YES
389  JACKSONVILLE       JONES COLLEGE JACKSONVL                             3       NO
390  LAKE CITY          LAKE CITY CMTY COLLEGE                              1       YES
391  EUSTIS             LAKE COUNTY AREA VOCATIONAL-TECHNICAL CE            3       NO
392  LEESBURG           LAKE-SUMTER CMTY COLLEGE                            1       NO
393  FORT MYERS         LEE COUNTY VOCATIONAL-TECHNICAL CENTER              2       YES
394  TALLAHASSEE        LEWIS M LIVELY AREA VOC-TECHNICAL CENTER            2       NO
395  MIAMI              LINDSEY HOPKINS TECHNICAL EDUCATION CEN             2       YES
396  MIAMI              LINDSEY HOPKINS TECHNICAL EDUCATION CENT            2       NO
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STATE=FL

OBS	CITY	NAME	INSTITUTION TYPE	INS
397	BRADENTON	MANATEE JUNIOR COLLEGE	1	NO
398	BRADENTON	MANATEE VOCATIONAL-TECHNICAL CENTER	2	NO
399	EATON PARK	MAYNARD A TRAVIS VOC-TECH CTR	2	NO
400	MIAMI LAKES	MIAMI LAKES TECHNICAL EDUCATION CENTER	2	NO
401	MIAMI	MIAMI-DADE CMTY COLLEGE	1	NO
402	ORLANDO	MID-FLORIDA TECHNICAL INSTITUTE	2	NO
403	MADISON	NORTH FLORIDA JR COLLEGE	1	NO
404	RIVIERA BEACH	NORTH TECHNICAL EDUCATION CENTER	2	NO
405	NICEVILLE	OKALOOSA-WALTON JUNIOR C	1	YES
406	ORLANDO	ORLANDO COLLEGE	3	NO
407	ORLANDO	ORLANDO VOCATIONAL-TECHNICAL CENTER	2	NO
408	LAKE WORTH	PALM BEACH JUNIOR COLLEGE	1	YES
409	PALM BCH GDN	PALM BEACH JUNIOR COLLEGE NORTH CAMPUS	1	YES
410	DADE CITY	PASCO-HERNANDO CC	1	YES
411	PENSACOLA	PENSACOLA JUNIOR COLLEGE	1	NO
412	CLEARWATER	PINELLAS VOCATIONAL TECHNICAL INSTITUTE	2	NO
413	WINTER HAVEN	POLK COMMUNITY COLLEGE	1	YES
414	MILTON	RADFORD M LOCKLIN VOCATIONAL TECHNICAL C	2	NO
415	WINTER HAVEN	RIDGE VOCATIONAL TECHNICAL CTR	2	YES
416	MIAMI	ROBERT MORGAN VOCATIONAL TECHNICAL CENT	2	YES
417	MIAMI	ROBERT MORGAN VOCATIONAL TECHNICAL CENTE	2	NO
418	SAINT AUGUSTINE	SAINT AUGUSTINE TECHNICAL CENTER	2	NO
419	SAINT LEO	SAINT LEO COLLEGE	3	NO
420	ST PETERSBURG	SAINT PETERSBG JR COLLEGE	1	NO
421	ST PETERSBURG	SAINT PETERSBURG VOCATIONAL INSTITUTE	2	YES
422	GAINESVILLE	SANTA FE CMTY COLLEGE	1	YES
423	SARASOTA	SARASOTA COUNTY VOCATIONAL-TECHNICAL CE	2	YES
424	SARASOTA	SARASOTA COUNTY VOCATIONAL-TECHNICAL CEN	2	NO
425	SANFORD	SEMINOLE CMTY COLLEGE	1	NO
426	HOLLYWOOD	SHERIDAN VOCATIONAL CENTER	2	YES
427	PALATKA	SNT JOHNS RIVER CMTY COL	2	NO
428	AVON PARK	SOUTH FLORIDA JR COLLEGE	1	YES
429	BOYNTON BEACH	SOUTH TECHNICAL EDUCATION CENTER	2	NO
430	CLEARWATER	ST PETERSBURG JR COLLEGE	1	NO
431	PALM HARBOR	ST PETERSBURG JUNIOR CLG TARPON SPRINGS	1	YES
432	LIVE OAK	SUWANNEE-HAMLITON AREAETH CENTER	2	NO
433	TALLAHASSEE	TALLAHASSEE CMTY COLLEGE	1	NO
434	TAMPA	TAMPA BAY VOC-TECH CENTER	2	NO
435	TAMPA	TAMPA COLLEGE	3	NO
436	CLEARWATER	TAMPA COLLEGE	3	NO
437	PERRY	TAYLOR COUNTY VOCATIONAL-TECHNICAL CENTE	2	NO
438	PANAMA CITY	THOMAS P HANEY VOCATIONAL TECHNICAL CEN	2	YES
439	PANAMA CITY	THOMAS P HANEY VOCATIONAL TECHNICAL CENT	2	NO
440	DUNEDIN	TRINITY COLLEGE	3	NO
441	ORLANDO	VALENCIA CMTY COLLEGE	2	NO
442	CHIPLEY	WASHINGTON-HOLMES AREA VOC-TECH SCHOOL	2	NO
443	BABSON PARK	WEBBER COLLEGE	3	YES
444	BELLE GLADE	WEST TECHNICAL EDUCATION CENTER	2	NO
445	WINTER GARDEN	WESTSIDE VOCATIONAL TECHNICAL CENTER	2	NO
446	WINTER PARK	WINTER PARK VOCATIONAL CENTER	2	YES
447	INVERNESS	WITHLACOOCHEE VOCATIONAL & ADULT EDUCATI	2	NO

---------------------------------- STATE=GA ----------------------------------

OBS	CITY	NAME	INSTITUTION TYPE	INS
448	TIFTON	ABRAHAM BALDWIN AGRL C	1	YES
449	ALBANY	ALBANY AREA V T S	2	NO
450	ALBANY	ALBANY JUNIOR COLLEGE	1	YES
451	SAVANNAH	ARMSTRONG STATE COLLEGE	3	YES
452	ATHENS	ATHENS A V T S	2	NO
453	ATLANTA	ATLANTA AREA TECHNICAL SCHOOL	2	NO
454	ATLANTA	ATLANTA JUNIOR COLLEGE	1	NO
455	AUGUSTA	AUGUSTA A V T S	2	YES
456	AUGUSTA	AUGUSTA COLLEGE	3	NO
457	BAINBRIDGE	BAINBRIDGE JUNIOR COLLEGE	1	YES
458	FITZGERALD	BEN HILL-IRWIN A V T S	2	YES
459	GAINSVILLE	BRENAU COLLEGE	3	NO
460	MOUNT VERNON	BREWTON-PARKER COLLEGE	1	YES
461	BRUNSWICK	BRUNSWICK JUNIOR COLLEGE	1	NO
462	CARROLLTON	CARROLL CO AREA VOCATIONAL-TECHNICAL SCH	2	NO
463	MORROW	CLAYTON JUNIOR COLLEGE	1	YES
464	COLUMBUS	COLUMBUS AREA VOCATIONAL-TECHNICAL SCHO	2	YES
465	COLUMBUS	COLUMBUS AREA VOCATIONAL-TECHNICAL SCHOO	2	NO
466	COLUMBUS	COLUMBUS COLLEGE	1	NO
467	ROME	COOSA VALLEY VOCATIONAL-TECHNICAL SCHOOL	2	NO
468	DALTON	DALTON JUNIOR COLLEGE	1	YES
469	CLARKSTON	DEKALB A V T S	2	YES
470	CLARKSTON	DEKALB COMMUNITY COLLEGE	2	NO
471	SWAINSBORO	EMANUEL CO JUNIOR COLLEGE	1	NO
472	FRANKLIN SPRG	EMMANUEL COLLEGE	3	NO
473	ATLANTA	EMORY UNIVERSITY	3	NO
474	ROME	FLOYD JUNIOR COLLEGE	1	NO
475	FORT VALLEY	FORT VALLEY STATE COLLEGE	3	YES
476	AMERICUS	GA SOUTHWESTERN COLLEGE	3	NO
477	GAINESVILLE	GAINESVILLE JR COLLEGE	1	NO
478	MILLEDGEVILLE	GEORGIA COLLEGE	3	YES
479	MILLEDGEVILLE	GEORGIA MILITARY COLLEGE	1	YES
480	STATESBORO	GEORGIA SOUTHERN COLLEGE	3	NO
481	ATLANTA	GEORGIA STATE UNIVERSITY	1	NO
482	BARNESVILLE	GORDON JUNIOR COLLEGE	1	NO
483	GRIFFIN	GRIFFIN-SPALDING CTY V T S	2	NO
484	LAWRENCEVILLE	GWINNETT A V T S	2	YES
485	WARNER ROBINS	HOUSTON VOC CTR, WARNER ROBINS BF	2	YES
486	MARIETTA	KENNESAW COLLEGE	3	YES
487	LA GRANGE	LA GRANGE COLLEGE	3	NO
488	OAKWOOD	LANIER A V T S	2	NO
489	MACON	MACON A V T S	2	NO
490	MACON	MACON JUNIOR COLLEGE	1	NO
491	MARIETTA	MARIETTA-COBB V T S	2	NO
492	AUGUSTA	MEDICAL COLLEGE OF GA	3	NO
493	COCHRAN	MIDDLE GEORGIA COLLEGE	1	NO
494	MOULTRIE	MOULTRIE A V T S	2	NO
495	CLARKSVILLE	NORTH GA TECH VOC SCHOOL	2	YES
496	DAHLONEGA	NORTH GEORGIA COLLEGE	1	NO
497	JASPER	PICKENS AREA VOCATIONAL-TECHNICAL SCHOO	2	YES
498	JASPER	PICKENS AREA VOCATIONAL-TECHNICAL SCHOOL	2	NO
499	WALESKA	REINHARDT COLLEGE	1	NO

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---------------------------------- STATE=GA -----------------------------------

OBS  CITY            NAME                                          INSTITUTION  INS
                                                                   TYPE

500  SAVANNAH        SAVANNAH AREA VOCATIONAL-TECHNICAL SCHOO           2       NO
501  SAVANNAH        SAVANNAH STATE COLLEGE                             3       YES
502  DOUGLAS         SOUTH GEORGIA COLLEGE                              1       YES
503  AMERICUS        SOUTH GEORGIA VOCATIONAL-TECHNICAL SCHOO           2       NO
504  MARIETTA        STHN TECH INST                                     3       NO
505  SWAINSBORO      SWAINSBORO A V T S                                 2       NO
506  THOMASVILLE     THOMAS AREA VOCATIONAL-TECHNICAL SCHOOL            2       NO
507  THOMASVILLE     THOMAS COUNTY CC                                   1       YES
508  LA GRANGE       TROUP CO AREA VOCATIONAL-TECHNICAL SCHOO           2       NO
509  CLEVELAND       TRUETT MCCONNELL COLLEGE                           1       YES
510  THOMASTON       UPSON CTY A V T S                                  2       NO
511  VALDOSTA        VALDOSTA AREA VOCATIONAL-TECHNICAL SCHOO           2       NO
512  VALDOSTA        VALDOSTA STATE COLLEGE                             3       YES
513  ROCK SPRINGS    WALKER CTY A V T S                                 2       NO
514  WAYCROSS        WAYCROSS JUNIOR COLLEGE                            1       YES
515  WAYCROSS        WAYCROSS-WARE CTY A V T S                          2       NO
516  CARROLLTON      WEST GEORGIA COLLEGE                               1       NO


---------------------------------- STATE=HI -----------------------------------

      OBS    CITY          NAME                        INSTITUTION    INS
                                                       TYPE

      517    LAAIE         BYU HAWAII CAMPUS                3         YES
      518    HILO          HAWAII AT HILO, UNIV OF          3         YES
      519    HONOLULU      HAWAII AT MANOA UNIV OF          1         NO
      520    HONOLULU      HAWAII PACIFIC COLLEGE           3         NO
      521    HONOLULU      HONOLULU COMMUNITY COL           1         YES
      522    HONOLULU      KAPIOLANI CC                     1         YES
      523    LIHUE         KAUAI CC                         1         YES
      524    PEARL CITY    LEEWARD CC                       1         YES
      525    KAHULUI       MAUI COMMUNITY COLLEGE           1         NO
      526    KANEOHE       WINDWARD CC                      1         NO
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------------------------------- STATE=IA --------------------------------------

OBS    CITY              NAME                                        INSTITUTION   INS
                                                                     TYPE

527    DES MOINES        AMERICAN INSTITUTE BUS                           1        NO
528    CLINTON           CLINTON COMMUNITY COLLEGE                        1        YES
529    ANKENY            DES MOINES AREA CC                               1        YES
530    IOWA FALLS        ELLSWORTH CMTY COLLEGE                           1        NO
531    ANKENY            FAITH BAPT BIBLE COLLEGE                         3        YES
532    WATERLOO          HAWKEYE INST TECHNOLOGY                          1        NO
533    OTTUMWA           INDIAN HILLS CMTY COLLGE                         1        NO
534    CENTERVILLE       INDIAN HILLS COMMUNITY COLL                      1        NO
535    FORT DODGE        IOWA CENTRAL CC                                  1        NO
536    WEBSTER CITY      IOWA CENTRAL COMM COLLEGE                        1        NO
537    EAGLE GROVE       IOWA CENTRAL COMMUNITY COLL                      1        YES
538    ESTHERVILLE       IOWA LAKES CC                                    1        NO
539    EMMETSBURG        IOWA LAKES COMMUNITY COLLEGE                     1        NO
540    COUNCIL BLF       IOWA WESTERN CMTY COLLEGE                        1        NO
541    CLARINDA          IOWA WESTERN COMMUNITY COLLEGE                   1        YES
542    CEDAR RAPIDS      KIRKWOOD CMTY COLLEGE                            1        NO
543    MARSHALLTOWN      MARSHALLTWN CMTY COLLEGE                         1        NO
544    SIOUX CITY        MORNINGSIDE COLLEGE                              3        YES
545    CLINTON           MOUNT SAINT CLARE COLLEGE                        3        NO
546    MUSCATINE         MUSCATINE CMTY COLLEGE                           1        YES
547    MASON CITY        N IOWA AREA CMTY COLLEGE                         1        NO
548    PEOSTA            NORTHEAST IOWA TECHNICAL INSTITUTE               1        NO
549    CALMAR            NTHEST IA TECH INSTITUTE                         1        NO
550    SHELDON           NTHWST IOWA TECH C                               1        YES
551    BETTENDORF        SCOTT COMMUNITY COLLEGE                          1        YES
552    W BURLINGTON      SOUTHEASTERN CMTY COLLEGE                        1        NO
553    KEOKUK            SOUTHEASTERN COMMUNITY COLLEGE                   1        NO
554    CRESTON           SOUTHWESTERN CMTY COLLEGE                        1        NO
555    FOREST CITY       WALDORF COLLEGE                                  1        YES
556    SIOUX CITY        WESTERN IOWA TECH                                1        YES


------------------------------- STATE=ID --------------------------------------

OBS  CITY            NAME                                            INSTITUTION   INS
                                                                     TYPE

557  BOISE           BOISE STATE UNIVERSITY                                3       NO
558  IDAHO FALLS     EASTERN IDAHO VOCATIONAL TECHNICAL SCHO               2       YES
559  IDAHO FALLS     EASTERN IDAHO VOCATIONAL TECHNICAL SCHOO              2       NO
560  POCATELLO       IDAHO STATE UNIVERSITY                                3       YES
561  LEWISTON        LEWIS-CLARK ST COLLEGE                                3       NO
562  COEUR D'ALENE   NORTH IDAHO COLLEGE                                   1       NO
563  REXBURG         RICKS COLLEGE                                         1       NO
564  TWIN FALLS      SOUTHERN IDAHO,COLLEGE OF                             1       NO
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-------------------------------- STATE=IL --------------------------------

OBS	CITY	NAME	INSTITUTION TYPE	INS
565	RED BUD	BECK A V CENTER	2	YES
566	BELLEVILLE	BELLEVILLE AREA COLLEGE	1	NO
567	KEWANEE	BLACK HAWK C EAST CAMPUS	1	YES
568	MOLINE	BLACK HAWK C QUAD-CITIES	1	YES
569	GALESBURG	CARL SANDBURG COLLEGE	1	NO
570	CHICAGO	CENTRAL YMCA CMTY COLLEGE	1	NO
571	CHICAGO	CITY C CHGO CITY-WIDE C	1	NO
572	CHICAGO	CITY C CHGO KENNEDY-KING	1	NO
573	CHICAGO	CITY C CHGO MALCOLM X C	1	NO
574	CHICAGO	CITY C CHGO OLIVE-HARVEY	1	YES
575	CHICAGO	CITY C CHGO TRUMAN C	1	YES
576	CHICAGO	CITY C CHICAGO DALEY C	1	NO
577	CHICAGO	CITY C CHICAGO LOOP C	1	YES
578	CHICAGO	CITY C CHICAGO WRIGHT C	1	NO
579	DANVILLE	DANVILLE AREA CMTY C	1	YES
580	GLEN ELLYN	DUPAGE,COLLEGE OF	1	NO
581	CHICAGO	EAST-WEST UNIVERSITY	3	NO
582	ELGIN	ELGIN COMMUNITY COLLEGE	1	NO
583	FREEPORT	HIGHLAND CMTY COLLEGE	1	NO
584	ROBINSON	IL ESTN CC LINCOLN TRAIL	1	NO
585	FAIRFIELD	ILL ESTN CC FRONTIER CC	1	NO
586	OLNEY	ILL ESTN CC OLNEY CEN C	1	YES
587	MOUNT CARMEL	ILL ESTN CC WABASH VLY C	1	NO
588	CHAMPAIGN	ILL URBANA CAMPUS, U OF	3	NO
589	EAST PEORIA	ILLINOIS CENTRAL COLLEGE	1	NO
590	OGLESBY	ILLINOIS VLY CMTY COLLEGE	1	YES
591	CARTERVILLE	JOHN A LOGAN COLLEGE	1	NO
592	QUINCY	JOHN WOOD CMTY COLLEGE	1	YES
593	JOLIET	JOLIET JUNIOR COLLEGE	1	YES
594	KANKAKEE	KANKAKEE CMTY COLLEGE	1	NO
595	CENTRALIA	KASKASKIA COLLEGE	1	YES
596	MALTA	KISHWAUKEE COLLEGE	1	YES
597	GRAYSLAKE	LAKE COUNTY,COLLEGE OF	1	NO
598	MATTOON	LAKE LAND COLLEGE	1	NO
599	SPRINGFIELD	LAWRENCE A E C	2	NO
600	GODFREY	LEWIS AND CLARK CC	1	YES
601	ROMEOVILLE	LEWIS UNIVERSITY	3	NO
602	SPRINGFIELD	LINCOLN LAND CMTY COLLEGE	1	NO
603	CHICAGO	MACCORMAC COLLEGE	1	NO
604	WILMETTE	MALLINCKRODT COLLEGE	1	NO
605	CRYSTAL LAKE	MCHENRY COUNTY COLLEGE	1	NO
606	PALOS HILLS	MORAINE VLY CMTY COLLEGE	1	NO
607	MORRISON	MORRISON INST OF TECHN	1	YES
608	CICERO	MORTON COLLEGE	1	NO
609	EVANSTON	NATL COLLEGE ED	3	NO
610	EVANSTON	NORTHWESTERN UNIVERSITY	3	NO
611	DES PLAINES	OAKTON COMMUNITY COLLEGE	1	NO
612	KANKAKEE	OLIVET NAZARENE COLLEGE	3	YES
613	CHAMPAIGN	PARKLAND COLLEGE	1	NO
614	CAHOKIA	PARKS C OF ST LOUIS U	3	NO
615	CHICAGO HTS	PRAIRIE STATE COLLEGE	1	YES
616	INA	REND LAKE COLLEGE	1	YES

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-------------------------------- STATE=IL ---------------------------------

OBS   CITY             NAME                         INSTITUTION   INS
                                                    TYPE

617   DECATUR          RICHLAND CMTY COLLEGE             1        NO
618   ROCKFORD         ROCK VALLEY COLLEGE               1        NO
619   ROCKFORD         ROCKFORD A V C                    2        NO
620   CHICAGO          ROOSEVELT UNIVERSITY              3        NO
621   CHICAGO          ROOSEVELT UNIVERSITY              3        YES
622   DIXON            SAUK VALLEY COLLEGE               1        NO
623   ULLIN            SHAWNEE COLLEGE                   1        YES
624   CHICAGO          SNT AUGUSTINE CMTY COL            1        NO
625   HARRISBURG       SOUTHEASTERN ILL COLLEGE          1        YES
626   CANTON           SPOON RIVER COLLEGE               1        NO
627   E SAINT LOUIS    STATE CC AT EAST ST.LOUIS         1        NO
628   CARBONDALE       STHN ILLINOIS U CARBONDL          3        YES
629   SOUTH HOLLAND    THORNTON CMTY COLLEGE             1        YES
630   RIVER GROVE      TRITON COLLEGE                    1        NO
631   CHICAGO          WASHBURNE TRADE SCHOOL            2        NO
632   SUGAR GROVE      WAUBONSEE CMTY COLLEGE            1        NO
633   PALATINE         WM RAINEY HARPER COLLEGE          1        YES
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STATE=IN

OBS	CITY	NAME	INSTITUTION TYPE	INS
634	DONALDSON	ANCILLA DOMINI COLLEGE	1	YES
635	ANDERSON	ANDERSON AREA VOCATIONAL-TECHNICAL SCHOO	2	NO
636	ANDERSON	ANDERSON COLLEGE	3	YES
637	MUNCIE	BALL STATE UNIVERSITY	3	YES
638	INDIANAPOLIS	BUTLER UNIVERSITY	3	YES
639	EVANSVILLE	EVANSVILLE,UNIVERSITY OF	3	NO
640	HUNTINGTON	HUNTINGTON COLLEGE	3	NO
641	SOUTH BEND	IND VOC TE C-NTHCEN TI IN	1	YES
642	INDIANAPOLIS	IND VOC TEC C-CE IN TE IN	1	YES
643	COLUMBUS	IND VOC TEC C-COLUM TI IN	1	NO
644	MUNCIE	IND VOC TEC C-E CE TE IN	1	NO
645	KOKOMO	IND VOC TEC C-KOKO TE IN	1	YES
646	LAFAYETTE	IND VOC TEC C-LAF TE IN	1	YES
647	FORT WAYNE	IND VOC TEC C-NE TE IN	1	NO
648	SELLERSBURG	IND VOC TEC C-STHCE TE IN	1	NO
649	EVANSVILLE	IND VOC TEC C-SW TEC IN	1	NO
650	TERRE HAUTE	IND VOC TEC C-WB VY TE IN	1	NO
651	RICHMOND	IND VOC TEC C-WHWTR TE IN	1	NO
652	GARY	IND VOC TECH COL-NTHWST	1	YES
653	MADISON	IND VOC TECH COL-STHEST	1	NO
654	FORT WAYNE	IND-PURDUE U FORT WAYNE	3	NO
655	INDIANAPOLIS	IND-PURDUE U INDIANAPOLIS	3	NO
656	INDIANAPOLIS	INDIANA BAPTIST COLLEGE	3	NO
657	INDIANAPOLIS	INDIANA CEN UNIVERSITY	3	NO
658	FORT WAYNE	INDIANA INST TECHNOLOGY	2	NO
659	EVANSVILLE	INDIANA ST U EVANSVILLE	3	YES
660	TERRE HAUTE	INDIANA STATE U MAIN CAM	3	NO
661	KOKOMO	INDIANA U AT KOKOMO	3	YES
662	SOUTH BEND	INDIANA U AT SOUTH BEND	3	YES
663	BLOOMINGTON	INDIANA U BLOOMINGTON	3	NO
664	GARY	INDIANA U NORTHWEST	3	YES
665	NEW ALBANY	INDIANA U SOUTHEAST	3	NO
666	RICHMOND	INDIANA UNIVERSITY EAST	1	YES
667	INDIANAPOLIS	J EVERETT LIGHT CAREER CENTER	2	YES
668	N MANCHESTER	MANCHESTER COLLEGE	3	NO
669	INDIANAPOLIS	MARIAN COLLEGE	3	NO
670	MARION	MARION COLLEGE	3	NO
671	OAKLAND CITY	OAKLAND CITY COLLEGE	3	NO
672	W LAFAYETTE	PURDUE U	3	YES
673	HAMMOND	PURDUE U CALUMET CAMPUS	3	NO
674	WESTVILLE	PURDUE U NORTH CEN CAMPUS	1	NO
675	FORT WAYNE	SAINT FRANCIS COLLEGE	3	YES
676	RENSSELAER	SAINT JOSEPH'S COLLEGE	3	NO
677	ST MARY WDS	SAINT MARY-OF-THE-WOODS C	3	NO
678	ANGOLA	TRI-STATE UNIVERSITY	3	YES
679	VINCENNES	VINCENNES UNIVERSITY	1	YES
680	JASPER	VINCENNES UNIVERSITY JASPER	1	YES

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OBS  CITY           NAME                                           INSTITUTION  INS
                                                                   TYPE

681  IOLA           ALLEN CO CMTY COLLEGE                                1      NO
682  GREAT BEND     BARTON CO CMTY COLLEGE                               1      NO
683  NORTH NEWTON   BETHEL COLLEGE                                       3      YES
684  NORTH NEWTON   BETHEL COLLEGE                                       3      NO
685  EL DORADO      BUTLER CO CMTY COLLEGE                               1      YES
686  MCPHERSON      CENTRAL COLLEGE                                      1      NO
687  NEWTON         CENTRAL KANSAS AREA VOC-TECH SCHOOL                  2      NO
688  CONCORDIA      CLOUD CO CMTY COLLEGE                                1      NO
689  COFFEYVILLE    COFFEYVL CMTY COLLEGE                                1      NO
690  COLBY          COLBY COMMUNITY COLLEGE                              1      NO
691  ARKANSAS CITY  COWLEY CO CMTY COLLEGE                               1      YES
692  DODGE CITY     DODGE CTY CMTY COLLEGE                               1      NO
693  KANSAS CITY    DONNELLY COLLEGE                                     1      NO
694  EMPORIA        EMPORIA STATE UNIVERSITY                             3      NO
695  HAYS           FORT HAYS ST UNIVERSITY                              3      NO
696  WICHITA        FRIENDS UNIVERSITY                                   3      NO
697  FORT SCOTT     FT SCOTT CMTY COLLEGE                                1      NO
698  GARDEN CITY    GARDEN CITY CMTY COLLEGE                             1      NO
699  LAWRENCE       HASKELL INDIAN JR COLLEGE                            1      YES
700  HESSTON        HESSTON COLLEGE                                      1      YES
701  HIGHLAND       HIGHLAND CMTY COLLEGE                                1      NO
702  HUTCHINSON     HUTCHINSN CMTY COLLEGE                               1      YES
703  INDEPENDENCE   INDEPENDENCE CMTY COLLEGE                            1      YES
704  OVERLAND PARK  JOHNSN CO CMTY COLLEGE                               1      NO
705  KANSAS CITY    KANSAS CITY AREA VOC-TECH SCHOOL                     2      NO
706  KANSAS CITY    KANSAS CITY KANS CMTY C                              2      YES
707  KANSAS CITY    KANSAS MED CENTER U OF                               3      NO
708  SALINA         KANSAS TECHNICAL INST                                1      YES
709  SALINA         KANSAS WESLEYAN                                      3      YES
710  TOPEKA         KAW AREA VOC-TECH SCH                                2      NO
711  PARSONS        LABETTE CMTY COLLEGE                                 1      YES
712  LIBERAL        LIBERAL AREA VOC-TECH SCHOOL                         2      NO
713  MANHATTAN      MANHATTAN AREA VOC-TECH SCHOOL                       2      NO
714  SALINA         MARYMOUNT COLLEGE OF KANSAS                          3      YES
715  MCPHERSON      MCPHERSON COLLEGE                                    3      YES
716  OLATHE         MID-AMERICA NAZARENE C                               3      NO
717  CHANUTE        NEOSHO CO CMTY COLLEGE                               1      YES
718  BELOIT         NORTH CENTRAL KANSAS AREA VOC-TECH SCHOO             2      NO
719  ATCHISON       NORTHEAST KANSAS AREA VOC-TECH SCHOOL                2      NO
720  GOODLAND       NORTHWEST KANSAS AREA VOC-TECH SCHOOL                2      NO
721  PITTSBURG      PITTSBURG ST UNIVERSITY                              3      NO
722  PRATT          PRATT CMTY COLLEGE                                   1      YES
723  WINFIELD       SAINT JOHN'S COLLEGE                                 1      NO
724  SALINA         SALINA AREA VOC-TECH SCHOOL                          2      NO
725  COFFEYVILLE    SE KANSAS A V T  S                                   2      YES
726  LIBERAL        SEWARD CO CMTY COLLEGE                               1      YES
727  COLUMBUS       SOUTHEAST KANSAS AREA VOC-TECH SCHOOL                2      YES
728  DODGE CITY     SOUTHWEST KS AREA VOC-TECH SCH                       2      YES
729  HILLSBORO      TABOR COLLEGE                                        3      YES
730  TOPEKA         WASHBURN UNIV OF TOPEKA                              3      NO
731  WICHITA        WICHITA AREA VOC-TECH SCHOOL                         2      YES
732  WICHITA        WICHITA STATE UNIVERSITY                             3      NO
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OBS  CITY            NAME                                       INSTITUTION  INS
                                                                 TYPE

733  ASHLAND         ASHLAND COMMUNITY COLLEGE                        1      NO
734  ASHLAND         ASHLAND STATE VOCATIONAL-TECHNICAL SCHOO         2      NO
735  GLASGOW         BARREN CTY A V E C                               2      YES
736  PINEVILLE       BELL CTY A V E C                                 2      YES
737  LOUISVILLE      BELLARMINE COLLEGE                               3      NO
738  BOWLING GREEN   BOWLING GREEN STATE VOCATIONAL TECHNICA          2      YES
739  BOWLING GREEN   BOWLING GREEN STATE VOCATIONAL TECHNICAL         2      NO
740  OWENSBORO       BRESCIA COLLEGE                                  3      NO
741  CAMPBELLSVL     CAMPBELLSVILLE COLLEGE                           3      YES
742  LEXINGTON       CENTRAL KENTUCKY STATE VOC-TECH SCHOOL           2      NO
743  HOPKINSVILLE    CHRISTIAN CTY A V E C                            2      YES
744  CORBIN          CORBIN A V E C                                   2      NO
745  WILLIAMSBURG    CUMBERLAND COLLEGE                               3      NO
746  OWENSBORO       DAVIESS COUNTY STATE VOCATIONAL-TECHNICA         2      NO
747  RICHMOND        EASTERN KY UNIVERSITY                            3      NO
748  ELIZABETHTOWN   ELIZABETHTOWN STATE VOC-TECH SCHOOL              2      NO
749  HARLAN          HARLAN STATE VOC-TECH SCHOOL                     2      NO
750  HAZARD          HAZARD COMMUNITY COLLEGE                         1      NO
751  HAZARD          HAZARD STATE VOCATIONAL-TECHNICAL SCHOOL         2      YES
752  HENDERSON       HENDERSON CMTY COLLEGE                           1      YES
753  HOPKINSVILLE    HOPKINSVILLE CMTY COLLEGE                        1      NO
754  LOUISVILLE      JEFFERSON CMTY COLLEGE                           1      NO
755  LOUISVILLE      JEFFERSON STATE VOC-TECH SCHOOL                  2      NO
756  FRANKFORT       KENTUCKY STATE UNIVERSITY                        3      YES
757  OWENSBORO       KENTUCKY WESLEYAN COLLEGE                        3      NO
758  LONDON          LAUREL COUNTY STATE VOC-TECH SCHOOL              2      NO
759  JACKSON         LEES JUNIOR COLLEGE                              1      NO
760  WHITESBURG      LETCHER CTY A V E C                              2      NO
761  COLUMBIA        LINDSEY WILSON COLLEGE                           1      NO
762  LOUISVILLE      LOUISVILLE,UNIVERSITY OF                         3      NO
763  MADISONVILLE    MADISONVILLE STATE VOC-TECH SCHOOL               2      NO
764  PAINTSVILLE     MAYO STATE VOC-TECH SCHOOL                       2      YES
765  MAYSVILLE       MAYSVILLE A V E C                                2      YES
766  MAYSVILLE       MAYSVILLE CMTY COLLEGE                           1      YES
767  MIDWAY          MIDWAY COLLEGE                                   1      NO
768  MT STERLING     MONTGOMERY CTY A V E C                           2      YES
769  MOREHEAD        MOREHEAD STATE UNIVERSITY                        3      NO
770  MURRAY          MURRAY A V E C                                   2      NO
771  MURRAY          MURRAY STATE UNIVERSITY                          3      NO
772  HIGHLAND HGTS   NORTHERN CAMPBELL COUNTY VOC- TECH SCHOO         2      NO
773  COVINGTON       NORTHERN KENTUCKY STATE VOC-TECH SCHOOL          2      NO
774  HIGHLAND HTS    NORTHERN KENTUCKY UNIV                           3      NO
775  OWENSBORO       OWENSBORO VOCATIONAL-TECHNICAL SCHOOL            2      NO
776  PADUCAH         PADUCAH COMMUNITY COLLEGE                        1      NO
777  PIKEVILLE       PIKEVILLE COLLEGE                                3      NO
778  PRESTONBURG     PRESTONBURG CMTY COLLEGE                         1      YES
779  MOREHEAD        ROWAN STATE VOC-TECH SCHOOL                      2      YES
780  RUSSELL         RUSSELL AREA VOC EDU CTR                         2      NO
781  ST CATHARINE    SAINT CATHARINE COLLEGE                          1      NO
782  SOMERSET        SOMERSET CMTY COLLEGE                            1      NO
783  SOMERSET        SOMERSET STATE VOC-TECH SCHOOL                   2      NO
784  CUMBERLAND      SOUTHEAST CMTY COLLEGE                           1      NO
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-------------------------------- STATE=KY ----------------------------------

OBS     CITY            NAME                                       INSTITUTION  INS
                                                                   TYPE

785  CRESTVIEW HLS   THOMAS MORE COLLEGE                                3       NO
786  LEXINGTON       U OF KY CMTY COL SYS                               3       NO
787  BARBOURVILLE    UNION COLLEGE                                      3       NO
788  PADUCAH         WEST KENTUCKY STATE VOCATIONAL TECHNICAL           2       NO
789  BOWLING GREEN   WESTERN KY UNIVERSITY                              3       NO



-------------------------------- STATE=LA ----------------------------------

OBS  CITY              NAME                                      INSTITUTION  INS
                                                                 TYPE

790  ALEXANDRIA        ALEXANDRIA VOCATIONAL-TECHNICAL INSTITU        2       YES
791  ALEXANDRIA        ALEXANDRIA VOCATIONAL-TECHNICAL INSTITUT       2       NO
792  SORRENTO          ASCENSION VOCATIONAL-TECHNICAL SCHOOL          2       NO
793  COTTONPORT        AVOYELLES VOCATIONAL-TECHNICAL INSTITUTE       2       NO
794  BASTROP           BASTROP VOCATIONAL-TECHNICAL INSTITUTE         2       NO
795  BATON ROUGE       BATON ROUGE VOCATIONAL TECHNICAL INSTITU       2       NO
796  BOSSIER CITY      BOSSIER PARISH CC                              1       NO
797  HOMER             CLAIBORNE VOCATIONAL-TECHNICAL SCHOOL          2       YES
798  FERRIDAY          CONCORDIA VOCATIONAL-TECHNICAL SCHOOL          2       YES
799  NEW ORLEANS       DELGADO CMTY COLLEGE                           1       NO
800  WEST MONROE       DELTA-OUACHITA VOCATIONAL-TECHNICAL INST       2       YES
801  CHALMETTE         ELAINE P NUNEZ VOCATIONAL-TECHNICAL SCH        2       YES
802  CHALMETTE         ELAINE P NUNEZ VOCATIONAL-TECHNICAL SCHO       2       NO
803  ST MARTINVILLE    EVANGELINE VOCATIONAL TECHNICAL SCHOOL         2       NO
804  GREENSBURG        FLORIDA PARISHES VOCATIONAL SCHOOL             2       YES
805  JACKSON           FOLKES VOCATIONAL-TECHNICAL SCHOOL             2       NO
806  GALLIANO          GOLDEN MEADOW BRANCH VOCATIONAL-TECHNICA       2       NO
807  GRAMBLING         GRAMBLING STATE UNIV                           3       YES
808  ABBEVILLE         GULF AREA VOC-TECH SCH                         2       NO
809  HAMMOND           HAMMOND AREA VOCATIONAL SCHOOL                 2       YES
810  WINNFIELD         HUEY P. LONG MEMORIAL VOC SCH                  2       NO
811  BATON ROUGE       JAMES M FRAZIER VOCATIONAL SCHOOL              2       NO
812  JENNINGS          JEFFERSON DAVIS VOCATIONAL-TECHNICAL SC        2       NO
813  JENNINGS          JEFFERSON DAVIS VOCATIONAL-TECHNICAL SCH       2       NO
814  METAIRIE          JEFFERSON PARISH VOCATIONAL-TECHNICAL SC       2       NO
815  NEW ORLEANS       LA ST U MEDICAL CENTER                         3       NO
816  ALEXANDRIA        LA STATE U ALEXANDRIA                          1       NO
817  EUNICE            LA STATE U EUNICE                              1       NO
818  LAFAYETTE         LAFAYETTE REGIONAL VO-TECH INSTITUTE           2       NO
819  LAKE PROVIDENCE   LAKE PROVIDENCE VOCATIONAL-TECHNICAL SCH       2       NO
820  PINEVILLE         LOUISIANA COLLEGE                              3       NO
821  RUSTON            LOUISIANA TECH UNIVERSITY                      3       YES
822  NEW ORLEANS       LOYOLA U IN NEW ORLEANS                        3       NO
823  MANSFIELD         MANSFIELD VOCATIONAL-TECHNICAL SCHOOL          2       NO
824  LAKE CHARLES      MCNEESE STATE UNIVERSITY                       3       YES
825  NEW ROADS         MEMORIAL AREA VOCATIONAL SCHOOL                2       NO
826  NATCHITOCHES      NATCHITOCHES-CENTRAL AREA VOCATIONAL TE        2       YES
827  NATCHITOCHES      NATCHITOCHES-CENTRAL AREA VOCATIONAL TEC       2       NO
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OBS  CITY            NAME                                           INSTITUTION  INS
                                                                    TYPE

828  NEW ORLEANS     NEW ORLEANS REGIONAL VOC TECH INSTITUTE             2        NO
829  NEW ORLEANS     NEW ORLS BAPT THEOL SEM                             3        NO
830  THIBODAUX       NICHOLLS STATE UNIVERSITY                           3        NO
831  FARMERVILLE     NORTH CENTRAL AREA VOCATIONAL-TECHNICAL             1        NO
832  MONROE          NORTHEAST LOUISIANA U                               3        YES
833  WINNSBORO       NORTHEAST LOUISIANA VOCATIONAL SCHOOL               2        NO
834  MINDEN          NORTHWEST LOUISIANA VOCATIONAL-TECHNICAL            2        NO
835  NATCHITOCHES    NTHWSTN ST U OF LA                                  3        NO
836  OAKDALE         OAKDALE VOCATIONAL-TECHNICAL SCHOOL                 2        NO
837  OPELOUSAS       OPELOUSAS A V S                                     2        YES
838  NEW ORLEANS     OUR LADY OF HOLY CROSS C                            3        NO
839  PORT SULPHUR    PORT SULPHUR VOCATIONAL-TECHNICAL SCHOOL            2        NO
840  RESERVE         RIVER PARISHES VOCATIONAL-TECHNICAL SCHO            2        NO
841  RUSTON          RUSTON VOCATIONAL-TECHNICAL SCHOOL                  2        NO
842  MANY            SABINE VALLEY VOCATIONAL-TECHNICAL SCHOO            2        NO
843  CHALMETTE       SAINT BERNARD PARISH CC                             1        NO
844  SHREVEPORT      SHREVEPORT BOSSIER VOC-TECH INSTITUTE               2        NO
845  NEW ORLEANS     SIDNEY N COLLIER MEMORIAL VOC-TECH SCH              2        NO
846  SLIDELL         SLIDELL VOCATIONAL-TECHNICAL SCHOOL                 2        NO
847  HOUMA           SOUTH LOUISIANA VOC-TECH INSTITUTE                  2        YES
848  CROWLEY         SOUTHWEST LOUISIANA VOCATIONAL-TECHNICAL            2        YES
849  LAKE CHARLES    SOWELA TECHNICAL INSTITUTE                          2        NO
850  HAMMOND         STHESTN LA UNIVERSITY                               3        NO
851  BATON ROUGE     STHN U A&M C BATON ROUGE                            3        YES
852  NEW ORLEANS     STHN U AT NEW ORLEANS                               3        NO
853  SHREVEPORT      STHN U SHREVEPORT-BOSSIER                           1        NO
854  LAFAYETTE       STHWSTN LOUISIANA,U OF                              3        YES
855  BOGALUSA        SULLIVAN VOCATIONAL-TECHNICAL INSTITUTE             2        NO
856  OPELOUSAS       T H HARRIS VOCATIONAL-TECHNICAL SCHOOL              2        NO
857  TALLULAH        TALLULAH VOCATIONAL-TECHNICAL SCHOOL                2        YES
858  NEW IBERIA      TECHE AREA VOCATIONAL-TECHNICAL SCHOOL              2        NO
859  THIBODAUX       THIBODAUX AREA VOCATIONAL-TECHNICAL SCHO            2        NO
860  VILLE PLATTE    VILLE PLATTE VOCATIONAL-TECHNICAL SCHOOL            2        NO
861  HARVEY          WEST JEFFERSON PARISH VOC-TECH SCHOOL               2        YES
862  LEESVILLE       WEST LOUSIANA VOCATIONAL-TECHNICAL SCHOO            2        NO
863  PLAQUEMINE      WESTSIDE VOCATIONAL-TECHNICAL SCHOOL                2        NO
864  MORGAN CITY     YOUNG MEMORIAL VOCATIONAL-TECHNICAL SCHO            2        NO
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OBS        CITY          NAME
                                                                INSTITUTION   INS
                                                                TYPE

785   CRESTVIEW HLS   THOMAS MORE COLLEGE                            3        NO
786   LEXINGTON       U OF KY CMTY COL SYS                           3        NO
787   BARBOURVILLE    UNION COLLEGE                                  3        NO
788   PADUCAH         WEST KENTUCKY STATE VOCATIONAL TECHNICAL       2        NO
789   BOWLING GREEN   WESTERN KY UNIVERSITY                          3        NO



------------------------------- STATE=LA ----------------------------------------

OBS   CITY              NAME
                                                                 INSTITUTION  INS
                                                                 TYPE

790   ALEXANDRIA        ALEXANDRIA VOCATIONAL-TECHNICAL INSTITU        2       YES
791   ALEXANDRIA        ALEXANDRIA VOCATIONAL-TECHNICAL INSTITUT       2       NO
792   SORRENTO          ASCENSION VOCATIONAL-TECHNICAL SCHOOL          2       NO
793   COTTONPORT        AVOYELLES VOCATIONAL-TECHNICAL INSTITUTE       2       NO
794   BASTROP           BASTROP VOCATIONAL-TECHNICAL INSTITUTE         2       NO
795   BATON ROUGE       BATON ROUGE VOCATIONAL TECHNICAL INSTITU       2       NO
796   BOSSIER CITY      BOSSIER PARISH CC                              1       NO
797   HOMER             CLAIBORNE VOCATIONAL-TECHNICAL SCHOOL          2       YES
798   FERRIDAY          CONCORDIA VOCATIONAL-TECHNICAL SCHOOL          2       YES
799   NEW ORLEANS       DELGADO CMTY COLLEGE                           1       NO
800   WEST MONROE       DELTA-OUACHITA VOCATIONAL-TECHNICAL INST       2       YES
801   CHALMETTE         ELAINE P NUNEZ VOCATIONAL-TECHNICAL SCH        2       YES
802   CHALMETTE         ELAINE P NUNEZ VOCATIONAL-TECHNICAL SCHO       2       NO
803   ST MARTINVILLE    EVANGELINE VOCATIONAL TECHNICAL SCHOOL         2       NO
804   GREENSBURG        FLORIDA PARISHES VOCATIONAL SCHOOL             2       YES
805   JACKSON           FOLKES VOCATIONAL-TECHNICAL SCHOOL             2       NO
806   GALLIANO          GOLDEN MEADOW BRANCH VOCATIONAL-TECHNICA       2       NO
807   GRAMBLING         GRAMBLING STATE UNIV                           3       YES
808   ABBEVILLE         GULF AREA VOC-TECH SCH                         2       NO
809   HAMMOND           HAMMOND AREA VOCATIONAL SCHOOL                 2       YES
810   WINNFIELD         HUEY P. LONG MEMORIAL VOC SCH                  2       NO
811   BATON ROUGE       JAMES M FRAZIER VOCATIONAL SCHOOL              2       NO
812   JENNINGS          JEFFERSON DAVIS VOCATIONAL-TECHNICAL SC        2       NO
813   JENNINGS          JEFFERSON DAVIS VOCATIONAL-TECHNICAL SCH       2       NO
814   METAIRIE          JEFFERSON PARISH VOCATIONAL-TECHNICAL SC       2       NO
815   NEW ORLEANS       LA ST U MEDICAL CENTER                         3       NO
816   ALEXANDRIA        LA STATE U ALEXANDRIA                          1       NO
817   EUNICE            LA STATE U EUNICE                              1       NO
818   LAFAYETTE         LAFAYETTE REGIONAL VO-TECH INSTITUTE           2       NO
819   LAKE PROVIDENCE   LAKE PROVIDENCE VOCATIONAL-TECHNICAL SCH       2       NO
820   PINEVILLE         LOUISIANA COLLEGE                              3       NO
821   RUSTON            LOUISIANA TECH UNIVERSITY                      3       YES
822   NEW ORLEANS       LOYOLA U IN NEW ORLEANS                        3       NO
823   MANSFIELD         MANSFIELD VOCATIONAL-TECHNICAL SCHOOL          2       NO
824   LAKE CHARLES      MCNEESE STATE UNIVERSITY                       3       YES
825   NEW ROADS         MEMORIAL AREA VOCATIONAL SCHOOL                2       NO
826   NATCHITOCHES      NATCHITOCHES-CENTRAL AREA VOCATIONAL TE        2       YES
827   NATCHITOCHES      NATCHITOCHES-CENTRAL AREA VOCATIONAL TEC       2       NO
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OBS  CITY            NAME                                          INSTITUTION  INS
                                                                   TYPE

828  NEW ORLEANS     NEW ORLEANS REGIONAL VOC TECH INSTITUTE            2       NO
829  NEW ORLEANS     NEW ORLS BAPT THEOL SEM                            3       NO
830  THIBODAUX       NICHOLLS STATE UNIVERSITY                          3       NO
831  FARMERVILLE     NORTH CENTRAL AREA VOCATIONAL-TECHNICAL            1       NO
832  MONROE          NORTHEAST LOUISIANA U                              3       YES
833  WINNSBORO       NORTHEAST LOUISIANA VOCATIONAL SCHOOL              2       NO
834  MINDEN          NORTHWEST LOUISIANA VOCATIONAL-TECHNICAL           2       NO
835  NATCHITOCHES    NTHWSTN ST U OF LA                                 3       NO
836  OAKDALE         OAKDALE VOCATIONAL-TECHNICAL SCHOOL                2       NO
837  OPELOUSAS       OPELOUSAS A V S                                    2       YES
838  NEW ORLEANS     OUR LADY OF HOLY CROSS C                           3       NO
839  PORT SULPHUR    PORT SULPHUR VOCATIONAL-TECHNICAL SCHOOL           2       NO
840  RESERVE         RIVER PARISHES VOCATIONAL-TECHNICAL SCHO           2       NO
841  RUSTON          RUSTON VOCATIONAL-TECHNICAL SCHOOL                 2       NO
842  MANY            SABINE VALLEY VOCATIONAL-TECHNICAL SCHOO           2       NO
843  CHALMETTE       SAINT BERNARD PARISH CC                            1       NO
844  SHREVEPORT      SHREVEPORT BOSSIER VOC-TECH INSTITUTE              2       NO
845  NEW ORLEANS     SIDNEY N COLLIER MEMORIAL VOC-TECH SCH             2       NO
846  SLIDELL         SLIDELL VOCATIONAL-TECHNICAL SCHOOL                2       NO
847  HOUMA           SOUTH LOUISIANA VOC-TECH INSTITUTE                 2       YES
848  CROWLEY         SOUTHWEST LOUISIANA VOCATIONAL-TECHNICAL           2       YES
849  LAKE CHARLES    SOWELA TECHNICAL INSTITUTE                         2       NO
850  HAMMOND         STHESTN LA UNIVERSITY                              3       NO
851  BATON ROUGE     STHN U A&M C BATON ROUGE                           3       YES
852  NEW ORLEANS     STHN U AT NEW ORLEANS                              3       NO
853  SHREVEPORT      STHN U SHREVEPORT-BOSSIER                          1       NO
854  LAFAYETTE       STHWSTN LOUISIANA,U OF                             3       YES
855  BOGALUSA        SULLIVAN VOCATIONAL-TECHNICAL INSTITUTE            2       NO
856  OPELOUSAS       T H HARRIS VOCATIONAL-TECHNICAL SCHOOL             2       NO
857  TALLULAH        TALLULAH VOCATIONAL-TECHNICAL SCHOOL               2       YES
858  NEW IBERIA      TECHE AREA VOCATIONAL-TECHNICAL SCHOOL             2       NO
859  THIBODAUX       THIBODAUX AREA VOCATIONAL-TECHNICAL SCHO           2       NO
860  VILLE PLATTE    VILLE PLATTE VOCATIONAL-TECHNICAL SCHOOL           2       NO
861  HARVEY          WEST JEFFERSON PARISH VOC-TECH SCHOOL              2       YES
862  LEESVILLE       WEST LOUSIANA VOCATIONAL-TECHNICAL SCHOO           2       NO
863  PLAQUEMINE      WESTSIDE VOCATIONAL-TECHNICAL SCHOOL               2       NO
864  MORGAN CITY     YOUNG MEMORIAL VOCATIONAL-TECHNICAL SCHO           2       NO
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OBS	CITY	NAME	INSTITUTION TYPE	INS
865	PAXTON	ANNA MARIA COLLEGE	3	NO
866	MILTON	AQUINAS JC AT MILTON	1	NO
867	NEWTON	AQUINAS JC AT NEWTON	1	NO
868	MARLBOROUGH	ASSABET VALLEY REGIONAL VOC-TECH SCHOOL	2	YES
869	S LANCASTER	ATLANTIC UNION COLLEGE	3	YES
870	LONGMEADOW	BAY PATH JUNIOR COLLEGE	1	NO
871	BOSTON	BAY STATE JC OF BUS	1	NO
872	LEICESTER	BECKER JC-LEICESTER	1	YES
873	WORCESTER	BECKER JC-WORCESTER	1	YES
874	WALTHAM	BENTLEY COLLEGE	3	NO
875	PITTSFIELD	BERKSHIRE CMTY COLLEGE	1	YES
876	CANTON	BLUE HILLS REG TECH INST	1	NO
877	FALL RIVER	BRISTOL COMMUNITY COLLEGE	1	NO
878	TAUNTON	BRISTOL-PLYMOUTH REG V-T H S	2	NO
879	CHARLESTOWN	BUNKER HILL CMTY COLLEGE	1	NO
880	W BARNSTABLE	CAPE COD CMTY COLLEGE	1	NO
881	BOSTON	CHAMBERLAYNE JR COLLEGE	1	NO
882	NORTH ADAMS	CHARLES H MC CANN TECHNICAL SCHOOL	2	NO
883	FRANKLIN	DEAN JUNIOR COLLEGE	1	NO
884	FALL RIVER	DIMAN REGIONAL TECHNICAL INSTITUTE	2	NO
885	WOLLASTON	EASTERN NAZARENE COLLEGE	3	YES
886	WOLLASTON	EASTERN NAZARENE COLLEGE	3	NO
887	BEVERLY	ENDICOTT COLLEGE	1	YES
888	HATHORNE	ESSEX AG + TECH SCH	2	YES
889	BOSTON	FISHER JUNIOR COLLEGE	1	YES
890	BOSTON	FRANKLIN INST OF BOSTON	1	NO
891	TYNGSBORO	GREATER LOWELL V SCHOOL	2	NO
892	GREENFIELD	GREENFIELD CMTY COLLEGE	1	NO
893	NORWOOD	HENRY O PEABODY SCH FOR GIRLS	2	NO
894	HOLYOKE	HOLYOKE COMMUNITY COLLEGE	1	NO
895	FRAMINGHAM	JOSEPH P KEEFE TECH SCH	2	YES
896	BOSTON	LABOURE	2	NO
897	NEWTON	LASELL JUNIOR COLLEGE	1	NO
898	LOWELL	LOWELL,UNIVERSITY OF	3	NO
899	LYNN	LYNN V-T INST	2	NO
900	AMHERST	MASS AT AMHERST MA,U OF	3	NO
901	WELLESLEY HILLS	MASS BAY CMTY COLLEGE	1	NO
902	BROCKTON	MASSASOIT CMTY COLLEGE	1	NO
903	NORTH ANDOVER	MERRIMACK COLLEGE	3	NO
904	BEDFORD	MIDDLESEX CMTY COLLEGE	1	YES
905	BEDFORD	MIDDLESEX CMTY COLLEGE	1	NO
906	LEXINGTON	MINUTE MAN REG V-T H S	2	YES
907	NEWTON CENTRE	MOUNT IDA COLLEGE	1	NO
908	GARDNER	MT WACHUSETT CMTY COLLEGE	1	YES
909	BOSTON	NEW ENG INST APP ARTS-SCI	1	NO
910	BOSTON	NEWBURY JUNIOR COLLEGE	1	YES
911	BOSTON	NORTH BENNET STREET SCHOOL	2	NO
912	BEVERLY	NORTH SHORE CMTY COLLEGE	1	YES
913	BOSTON	NORTHEAST INSTITUTE OF INDUSTRIAL TECHNO	2	NO
914	BOSTON	NORTHEASTERN UNIVERSITY	3	NO
915	NORTH ADAMS	NORTHERN BERKSHIRE VOC REG SCHOOL	2	NO
916	HAVERHILL	NTHN ESSEX CMTY COLLEGE	1	NO

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OBS  CITY           NAME                                       INSTITUTION  INS
                                                               TYPE

917  QUINCY         QUINCY JUNIOR COLLEGE                           1       NO
918  QUINCY         QUINCY VOCATIONAL-TECHNICAL SCHOOL              2       NO
919  WORCESTER      QUINSIGAMOND CMTY COLLEGE                       1       NO
920  SPRINGFIELD    ROGER PUTNAM V SCH                              2       NO
921  BOSTON         ROXBURY COMMUNITY COLLEGE                       1       NO
922  NORTHAMPTON    SMITH AG V S                                    2       NO
923  SOUTH EASTON   SOUTHEASTERN TECHNICAL INSTITUTE                2       NO
924  SPRINGFIELD    SPRINGFIELD TECHNICAL CC                        1       YES
925  BOSTON         WENTWORTH INST OF TECH                          3       YES
926  SPRINGFIELD    WESTERN MASS PRECISION INSTITUTE                2       NO
927  BOSTON         WHEELOCK COLLEGE                                3       YES
928  HAVERHILL      WHITTER REG V-T H S                             2       NO
929  HOLYOKE        WILLIAM J DEAN VOCATIONAL-TECHNICAL HIGH        2       NO
930  BOSTON         WOMANS TECHNICAL INSTITUTE                      2       YES
931  WORCESTER      WORCESTER INDUSTRIAL TECHNICAL INSTITUT         2       YES
932  WORCESTER      WORCESTER INDUSTRIAL TECHNICAL INSTITUTE        2       NO
933  WORCESTER      WORCESTER JUNIOR COLLEGE                        1       YES
934  WORCESTER      WORCESTER V T S                                 2       NO
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    OBS    CITY            NAME                             INSTITUTION    INS
                                                            TYPE

    935    CUMBERLAND      ALLEGANY CMTY COLLEGE                 1          NO
    936    ARNOLD          ANNE ARUNDEL CMTY COLLEGE             1          NO
    937    BALTIMORE       BALTIMORE,CMTY COLLEGE OF             1          NO
    938    LAUREL          CAPITOL INST TECHNOLOGY               3          NO
    939    CATONSVILLE     CATONSVILLE CMTY COLLEGE              1          YES
    940    NORTH EAST      CECIL COMMUNITY COLLEGE               1          NO
    941    LA PLATA        CHARLES CO CMTY COLLEGE               1          YES
    942    WYE MILLS       CHESAPEAKE COLLEGE                    1          YES
    943    DUNDALK         DUNDALK CMTY COLLEGE                  1          YES
    944    BALT COUNTY     ESSEX COMMUNITY COLLEGE               1          NO
    945    FREDERICK       FREDERICK CMTY COLLEGE                1          YES
    946    MCHENRY         GARRETT COMMUNITY COLLEGE             1          NO
    947    HAGERSTOWN      HAGERSTOWN JUNIOR COLLEGE             1          YES
    948    BEL AIR         HARFORD COMMUNITY COLLEGE             1          NO
    949    COLUMBIA        HOWARD COMMUNITY COLLEGE              1          NO
    950    SILVER SPRING   MARYLAND C ART AND DESIGN             2          YES
    951    COLLEGE PARK    MD COLLEGE PARK CAM,U OF              3          NO
    952    ROCKVILLE       MONTGOMERY C ROCKVILLE                1          NO
    953    TAKOMA PARK     MONTGOMERY C TAKOMA PARK              1          YES
    954    GERMANTOWN      MONTGOMERY COL GERMANTOWN             1          NO
    955    LARGO           PRINCE GEORGES CC                     1          YES
    956    STEVENSON       VILLA JULIE COLLEGE                   3          YES
    957    SALISBURY       WOR-WIC TECH CMTY COLLEGE             1          NO
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-------------------------------- STATE=ME ------------------------------------

 OBS    CITY              NAME                                     INSTITUTION   INS
                                                                   TYPE

 958    PORTLAND          ANDOVER COLLEGE                               2        NO
 959    AUBURN            CENTRAL ME VOC-TECH INST                      2        NO
 960    BANGOR            EASTERN ME VOC-TECH INST                      1        NO
 961    BANGOR            HUSSON COLLEGE                                3        NO
 962    FAIRFIELD         KENNEBEC VLY VOC-TECH                         2        NO
 963    AUGUSTA           MAINE AT AUGUSTA U OF                         1        YES
 964    FARMINGTON        MAINE AT FARMINGTON U OF                      3        NO
 965    FORT KENT         MAINE AT FORT KENT U OF                       3        NO
 966    ORONO             MAINE AT ORONO, U OF                          3        NO
 967    PRESQUE ISLE      ME AT PRESQUE ISLE, U OF                      2        NO
 968    PRESQUE ISLE      NTHN ME VOC TECH INST                         1        NO
 969    PORTLAND          STHN MAINE, UNIV OF                           3        NO
 970    WATERVILLE        THOMAS COLLEGE                                3        NO
 971    UNITY             UNITY COLLEGE                                 3        NO
 972    SPRINGDALE        UNIVERSITY OF SOUTHERN MAINE                  3        NO
 973    CALAIS            WASHINGTON COUNTY VOC-TECH INSTITUTE          2        NO
 974    PORTLAND          WESTBROOK COLLEGE                             3        NO


-------------------------------- STATE=MI ------------------------------------

 OBS    CITY              NAME                                     INSTITUTION   INS
                                                                   TYPE

 975    ALPENA            ALPENA COMMUNITY COLLEGE                      1        NO
 976    BERRIEN SPG       ANDREWS UNIVERSITY                            3        YES
 977    OWOSSO            BAKER JUNIOR COLLEGE                          3        NO
 978    FLINT             BAKER JUNIOR COLLEGE BUS                      1        NO
 979    ESCANABA          BAY DE NOC CMTY COLLEGE                       1        YES
 980    GRAND RAPIDS      CALVIN COLLEGE                                3        NO
 981    DETROIT           CAREER DEVELOPMENT CENTER                     2        NO
 982    MT PLEASANT       CENTRAL MICH UNIVERSITY                       3        NO
 983    FLINT             CHAS S MOTT CMTY COLLEGE                      1        YES
 984    YPSILANTI         CLEARY COLLEGE                                3        NO
 985    GRAND RAPIDS      DAVENPORT COLLEGE                             1        NO
 986    KALAMAZOO         DAVENPORT COLLEGE                             1        NO
 987    LANSING           DAVENPORT COLLEGE LANSING BRANCH              1        YES
 988    UNIV CTR          DELTA COLLEGE                                 1        YES
 989    DETROIT           DETROIT BUSINESS INSTITUTE                    2        NO
 990    DEARBORN          DETROIT COLLEGE OF BUS                        3        NO
 991    MADISON HTS       DETROIT COLLEGE OF BUSINESS                   3        NO
 992    FLINT             DETROIT COLLEGE OF BUSINESS                   3        NO
 993    DETROIT           DETROIT INSTITUTE OF COMMERCE                 2        NO
 994    DETROIT           DETROIT,UNIVERSITY OF                         3        NO
 995    YPSILANTI         EASTERN MICH UNIVERSITY                       3        NO
 996    BIG RAPIDS        FERRIS STATE COLLEGE                          3        NO
 997    CENTREVILLE       GLEN OAKS CMTY COLLEGE                        1        NO
 998    FLINT             GM INST                                       2        NO
 999    IRONWOOD          GOGEBIC COMMUNITY COLLEGE                     1        NO
1000    GRAND RAPIDS      GRAND RAPIDS BAPT C & SEM                     3        YES
1001    GRAND RAPIDS      GRAND RAPIDS JR COLLEGE                       1        NO
1002    DEARBORN          HENRY FORD CMTY COLLEGE                       1        NO
1003    HIGHLAND PARK     HIGHLAND PK CMTY COLLEGE                      1        NO
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OBS   CITY               NAME                                         INSTITUTION  INS
                                                                      TYPE

1004    JACKSON            JACKSON BUSINESS INSTITUTE                   2         YES
1005    JACKSON            JACKSON COMMUNITY COLLEGE                    1         YES
1006    CEDAR SPRINGS      JORDAN COLLEGE                               3         NO
1007    KALAMAZOO          KALAMAZOO VALLEY CC                          1         NO
1008    BATTLE CREEK       KELLOGG COMMUNITY COLLEGE                    1         NO
1009    ROSCOMMON          KIRTLAND CMTY COLLEGE                        1         NO
1010    BENTON HARBOR      LAKE MICHIGAN COLLEGE                        1         NO
1011    SLT ST MARIE       LAKE SUPERIOR ST COLLEGE                     1         NO
1012    LANSING            LANSING COMMUNITY COLLEGE                    3         YES
1013    SOUTHFIELD         LAWRENCE INST TECHNOLOGY                     1         NO
1014    DETROIT            LEWIS C BUSINESS                             3         YES
1015    WARREN             MACOMB CMTY COLLEGE                          1         YES
1016    MT CLEMENS         MACOMB CTY C C-CENTER CAMPUS                 1         YES
1017    LIVONIA            MADONNA COLLEGE                              1         YES
1018    DETROIT            MARYGROVE COLLEGE                            3         NO
1019    DETROIT            MERCY COLLEGE OF DETROIT                     3         NO
1020    ROCHESTER          MICH CHRISTIAN COLLEGE                       3         NO
1021    ANN ARBOR          MICH-ANN ARBOR, UNIV OF                      1         YES
1022    EAST LANSING       MICHIGAN STATE UNIVERSITY                    3         NO
1023    HOUGHTON           MICHIGAN TECHNOLOGICAL U                     3         YES
1024    HARRISON           MID MICHIGAN CMTY COLLEGE                    3         YES
1025    MONROE             MONROE CO CMTY COLLEGE                       1         YES
1026    SIDNEY             MONTCALM CMTY COLLEGE                        1         NO
1027  MUSKEGON         MUSKEGON BUSINESS COLLEGE                          1         NO
1028  MUSKEGON         MUSKEGON CMTY COLLEGE                              1         NO
1029  PETOSKEY         NORTH CEN MICH COLLEGE                             1         NO
1030  MARQUETTE        NORTHERN MICH UNIVERSITY                           1         YES
1031  TRAVERSE CITY    NORTHWESTERN MICH COLLEGE                          3         YES
032   MIDLAND          NORTHWOOD INSTITUTE                                1         YES
1033  BLOOMFLD HLS     OAKLAND COMMUNITY COLLEGE                          3         YES
1034  AUBURN HEIGHTS   OAKLAND COMMUNITY COLLEGE AUBURN HILLS C           1         NO
1035  FARMINGTON       OAKLAND COMMUNITY COLLEGE ORCHARD RIDGE            1         NO
1036  ROCHESTER        OAKLAND UNIVERSITY                                 1         NO
1037  DETROIT          PAYNE-PULLIAM SCHOOL OF TRADE & COMMERC            1         YES
1038  DETROIT          PAYNE-PULLIAM SCHOOL OF TRADE & COMMERCE           3         NO
039   SAGINAW          SAGINAW BUSINESS INSTITUTE                         2         YES
1040  LIVONIA          SCHOOLCRAFT COLLEGE                                2         NO
1041  ROYAL OAK        SE OAKLAND VE CENTER-CONT ED                       2         NO
1042  FLINT            SERVICE CTR FOR VISUALLY IMPAIRED                  2         NO
043   DETROIT          SHAW COLLEGE AT DETROIT                            1         NO
1044  PORT HURON       SNT CLAIR CO CMTY COLLEGE                          2         YES
1045  DOWAGIAC         SOUTHWESTERN MICH COLLEGE                          3         NO
046   PLAINWELL        STATE TECHNICAL INSTITUTE & REHAB CENTER           3         NO
1047  HANCOCK          SUOMI COLLEGE                                      1         NO
1048  ANN ARBOR        WASHTENAW CMTY COLLEGE                             1         NO
1049  DETROIT          WAYNE COUNTY CMTY COLLEGE                          2         NO
050   DETROIT          WAYNE STATE UNIVERSITY                             1         YES
1051  SCOTTVILLE       WEST SHORE CMTY COLLEGE                            1         NO
1052  KALAMAZOO        WESTERN MICH UNIVERSITY                            1         NO
                                                                          3         NO
                                                                          1         YES
                                                                          3         NO
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OBS	CITY	NAME	INSTITUTION TYPE	INS
1053	ALBERT LEA	ALBERT LEA AREA VOCATIONAL-TECHNICAL INS	2	NO
1054	ALEXANDRIA	ALEXANDRIA VOC-TECH	2	YES
1055	ANOKA	ANOKA AREA VOC-TECH INSTITUTE	2	YES
1056	COON RAPIDS	AYESKA-RAMSEY CMTY COLLEGE	1	YES
1057	CAMBRIDGE	ANOKA-RAMSEY COMMUNITY COLL	1	YES
1058	AUSTIN	AUSTIN AREA VOCATIONAL-TECHNICAL INSTIT	2	YES
1059	AUSTIN	AUSTIN AREA VOCATIONAL-TECHNICAL INSTITU	2	NO
1060	AUSTIN	AUSTIN COMMUNITY COLLEGE	1	YES
1061	BEMIDJI	BEMIDJI AREA VOCATIONAL-TECHNICAL INSTIT	2	NO
1062	BEMIDJI	BEMIDJI STATE U	3	YES
1063	BRAINERD	BRAINERD AREA VOCATIONAL-TECHNICAL INST	2	YES
1064	BRAINERD	BRAINERD AREA VOCATIONAL-TECHNICAL INSTI	2	NO
1065	BRAINERD	BRAINERD CMTY COLLEGE	1	YES
1066	CANBY	CANBY AREA VOCATIONAL-TECHNICAL INSTITUT	2	NO
1067	ROSEMOUNT	DAKOTA CO AREA VOC-TECH	2	NO
1068	DETROIT LAKES	DETROIT LAKES AREA VOCATIONAL-TECHNICAL	2	NO
1069	DULUTH	DULTH AREA VOCATIONAL TECHNICAL INSTITU	2	YES
1070	DULUTH	DULTH AREA VOCATIONAL TECHNICAL INSTITUT	2	NO
1071	MINNEAPOLIS	DUNWOODY INDUSTRIAL INSTITUTE	2	NO
1072	E GRAND FORKS	EAST GRAND FORKS AREA VOC-TECH INSTITUTE	2	NO
1073	EVELETH	EVELETH AREA VOCATIONAL-TECHNICAL INSTIT	2	NO
1074	FARIBAULT	FARIBAULT AREA VOCATIONAL-TECHNICAL INST	2	NO
1075	FERGUS FALLS	FERGUS FALLS CMTY COLLEGE	1	YES
1076	MINNEAPOLIS	GOLDEN VLY LUTH COLLEGE	1	NO
1077	GRANITE FALLS	GRANITE FALLS AREA VOCATIONAL-TECHNICAL	2	YES
1078	BROOKLYN PARK	HENNEPIN TECH CTR	2	NO
1079	BROOKLYN PARK	HENNEPIN TECHNICAL CENTERS	2	YES
1080	MINNEAPOLIS	HENNEPIN TECHNICAL CENTERS	2	YES
1081	HIBBING	HIBBING AREA VOCATIONAL-TECHNICAL INSTIT	2	NO
1082	HIBBING	HIBBING COMMUNITY COLLEGE	1	YES
1083	HUTCHINSON	HUTCHINSON AREA VOCATIONAL-TECHNICAL INS	2	NO
1084	INVER GRV HTS	INVER HILLS CMTY COLLEGE	1	NO
1085	GRAND RAPIDS	ITASCA COMMUNITY COLLEGE	1	NO
1086	JACKSON	JACKSON AREA VOC-TECH INSTITUTE	2	YES
1087	WHITE BR LK	LAKEWOOD CMTY COLLEGE	1	NO
1088	DULUTH	LONDON RD CAMPUS-DAVTI	2	NO
1089	MANKATO	MANKATO AREA VOCATIONAL-TECHNICAL INSTI	2	YES
1090	MANKATO	MANKATO AREA VOCATIONAL-TECHNICAL INSTIT	2	NO
1091	MANKATO	MANKATO STATE UNIVERSITY	3	NO
1092	MINNEAPOLIS	MINN MNPLS SNT PAUL, U OF	3	NO
1093	CROOKSTON	MINN TECH C CROOKSTON, U	1	NO
1094	WASECA	MINN TECH C-WASECA, U OF	1	NO
1095	MINNEAPOLIS	MINNEAPOLIS AREA VOCATIONAL-TECHNICAL IN	2	NO
1096	MINNEAPOLIS	MINNEAPOLIS CMTY COLLEGE	1	YES
1097	MINNEAPOLIS	MINNEAPOLIS TECHNICAL INSTITUTE	2	NO
1098	DULUTH	MINNESOTA DULUTH, U OF	3	NO
1099	MOORHEAD	MOORHEAD AREA VOCATIONAL-TECHNICAL INSTI	2	NO
1100	MOORHEAD	MOORHEAD STATE UNIVERSITY	3	YES
1101	BROOKLYN PARK	N HENNEPIN CMTY COLLEGE	1	NO
1102	BLOOMINGTON	NORMANDALE CMTY COLLEGE	1	NO
1103	THF RIVR FLS	NORTHLAND CMTY COLLEGE	1	NO
1104	ST PAUL	NORTHWESTERN COLLEGE	3	NO

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---------------------------------- STATE=MN ----------------------------------------

 OBS  CITY                NAME
                                                                INSTITUTION  INS
                                                                TYPE

 1105 PINE CITY           PINE TECHNICAL INSTITUTE                   2         NO
 1106 PIPESTONE           PIPESTONE AREA VOCATIONAL-TECHNICAL INS    2         YES
 1107 PIPESTONE           PIPESTONE AREA VOCATIONAL-TECHNICAL INST   2         NO
 1108 INTERNATIONAL F     RAINY RIVER CMTY COLLEGE                   1         NO
 1109 RED WING            RED WING AREA VOCATIONAL-TECHNICAL INSTI   2         NO
 1110 ROCHESTER           ROCHESTER AREA VOCATIONAL-TECHNICAL INS    2         YES
 1111 ROCHESTER           ROCHESTER AREA VOCATIONAL-TECHNICAL INST   2         NO
 1112 ROCHESTER           ROCHESTER CMTY COLLEGE                     1         NO
 1113 SAINT CLOUD         SAINT CLOUD AREA VOCATIONAL-TECHNICAL IN   2         NO
 1114 MINNEAPOLIS         SAINT MARY'S JR COLLEGE                    1         NO
 1115 ST PAUL             ST PAUL TECH VOC INST                      2         YES
 1116 STAPLES             STAPLES TECHNICAL INSTITUTE                2         NO
 1117 MARSHALL            STHWST STATE UNIVERSITY                    3         NO
 1118 THIEF RIVER FLS     THIEF RIVER FALLS AREA VOCATIONAL-TECH I   2         NO
 1119 ELY                 VERMILION CMTY COLLEGE                     1         NO
 1120 WADENA              WADENA AREA VOCATIONAL-TECHNICAL INSTIT    2         YES
 1121 WADENA              WADENA AREA VOCATIONAL-TECHNICAL INSTITU   2         NO
 1122 WILLMAR             WILLMAR AREA VOCATIONAL-TECHNICAL INSTIT   2         NO
 1123 WILLMAR             WILLMAR CMTY COLLEGE                       1         NO
 1124 WINONA              WINONA AREA VOCATIONAL-TECHNICAL SCHOOL    2         YES
 1125 WORTHINGTON         WORTHINGTON CMTY COLLEGE                   1         NO
 1126 WHITE BEAR LAKE     916 AREA VOCATIONAL-TECHNICAL INSTITUTE    2         NO


---------------------------------- STATE=MO ----------------------------------------

 OBS   CITY               NAME
                                                                INSTITUTION  INS
                                                                TYPE

 1127  KANSAS CITY        AVILA COLLEGE                              3         NO
 1128  BOONVILLE          BOONSLICK AREA VOCATIONAL-TECHNICAL SCH    2         YES
 1129  BOONVILLE          BOONSLICK AREA VOCATIONAL-TECHNICAL SCHO   2         NO
 1130  CAPE GIRARDEAU     CAPE GIRARDEAU AREA VOCATIONAL SCHOOL      2         NO
 1131  FAYETTE            CENT METH COLLEGE                          3         NO
 1132  FAYETTE            CENTRAL METHODIST COLLEGE                  3         NO
 1133  WARRENSBURG        CENTRAL MO ST UNIVERSITY                   3         NO
 1134  CHILLICOTHE        CHILLICOTHE AREA VOCATIONAL-TECHNICAL SC   2         YES
 1135  COLUMBIA           COLUMBIA AREA VOCATIONAL SCH               2         NO
 1136  COLUMBIA           COLUMBIA COLLEGE                           3         YES
 1137  NEOSHO             CROWDER COLLEGE                            1         NO
 1138  CANTON             CULVER-STOCKTON COLLEGE                    3         NO
 1139  SPRINGFIELD        DRURY COLLEGE                              3         NO
 1140  UNION              EAST CENTRAL COLLEGE                       1         NO
 1141  SPRINGFIELD        EVANGEL COLLEGE                            3         YES
 1142  JOPLIN             FRANKLIN TECH SCHOOL                       2         YES
 1143  SPRINGFIELD        GRAFF AREA VOCATIONAL-TECHNICAL SCHOOL     2         YES
 1144  HANNIBAL           HANNIBAL AREA VOCATIONAL-TECHNICAL SCHO    2         NO
 1145  HANNIBAL           HANNIBAL AREA VOCATIONAL-TECHNICAL SCHOO   2         NO
 1146  HANNIBAL           HANNIBAL-LAGRANGE COLLEGE                  3         NO
 1147  HILLSBORO          JEFFERSON COLLEGE                          1         NO
 1148  KANSAS CITY        KANSAS CITY TECHNICAL EDUCATION CENTER     2         YES
 1149  KENNETT            KENNETT AREA VOC-TECH SCH                  2         NO
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OBS   CITY              NAME                                          INSTITUTION  INS
                                                                      TYPE


1150  KIRKSVILLE        KIRKSVILLE A V T S                                 2       NO
1151  CAMDENTON         LAKE AREA VOCATIONAL SCHOOL                        2       NO
1152  BONNE TERRE       LEAD BELT AREA VOCATIONAL-TECHNICAL SCH            2       YES
1153  BONNE TERRE       LEAD BELT AREA VOCATIONAL-TECHNICAL SCHO           2       NO
1154  LEXINGTON         LEX LA-RAY AREA VOCATIONAL-TECHNICAL SC            2       YES
1155  LEXINGTON         LEX LA-RAY AREA VOCATIONAL-TECHNICAL SCH           2       NO
1156  JEFFERSON CY      LINCOLN UNIVERSITY                                 3       YES
1157  ST LOUIS          LINDENWOOD COLLEGE                                 3       YES
1158  LINN              LINN TECHNICAL COLLEGE                             2       YES
1159  LEE'S SUMMIT      LONGVIEW CMTY COLLEGE                              1       NO
1160  KANSAS CITY       MAPLE WOODS CMTY COLLEGE                           1       NO
1161  MARSHALL          MARSHALL A V T  S                                  2       YES
1162  SAINT LOUIS       MARYVILLE COLLEGE                                  3       YES
1163  MEXICO            MEXICO AREA VOCATIONAL-TECHNICAL SCHOOL            2       YES
1164  FLAT RIVER        MINERAL AREA COLLEGE                               1       NO
1165  JOPLIN            MISSOURI STHN ST COLLEGE                           3       NO
1166  SAINT JOSEPH      MISSOURI WSTN ST COLLEGE                           3       NO
1167  KANSAS CITY       MISSOURI-KANSAS CITY,U OF                          3       NO
1168  MOBERLY           MOBERLY AREA JUNIOR COLLE                          1       NO
1169  MONETT            MONETT AREA VOCATIONAL SCHOOL                      2       NO
1170  SAINT JOSEPH      N.S.HILLYARD A.V.T.S                               2       NO
1171  NEVADA            NEVADA A V T S                                     2       NO
1172  NEW MADRID        NEW MADRID COUNTY R1 AREA VOC TECH                 2       NO
1173  JEFFERSON CITY    NICHOLS CAREER CENTER PRACTICAL NURSING            2       NO
1174  FLORISSANT        NORTH COUNTY TECHNICAL SCHOOL                      2       YES
1175  MARYVILLE         NORTHWEST MISSOURI AREA VOC TECH SCH               2       YES
1176  KIRKSVILLE        NTHEST MO ST UNIVERSITY                            3       NO
1177  MARYVILLE         NTHWST MO ST UNIVERSITY                            3       NO
1178  SAINT LOUIS       OFALLON TECHNICAL CENTER                           2       NO
1179  KANSAS CITY       PARK COLLEGE                                       3       NO
1180  KANSAS CITY       PENN VALLEY CMTY COLLEGE                           1       NO
1181  EOLIA             PIKE & LINCOLN CTIES A V S                         2       NO
1182  KANSAS CITY       PIONEER COMMUNITY COLLEGE                          1       NO
1183  POPLAR BLUFF      POPLAR BLUFF SCHOOL DIST PRACTICAL NURS            2       NO
1184  POPLAR BLUFF      POPLAR BLUFF SCHOOL DIST PRACTICAL NURSI           2       NO
1185  SAINT LOUIS       RANKEN TECHNICAL INSTITUTE                         2       YES
1186  REEDS SPRING      REEDS SPRING AREA VO-TECH SCHOOL                   2       YES
1187  ROLLA             ROLLA AREA VOCATIONAL-TECHNICAL SCHOOL             2       YES
1188  KIRKWOOD          SAINT LOUIS CC-MERAMEC                             1       YES
1189  O'FALLON          SAINT MARY'S C O'FALLON                            1       NO
1190  SIKESTON          SIKESTON AREA VOCATIONAL SCHOOL                    2       YES
1191  SAINT LOUIS       SNT LU CC-FLORISSANT VLY                           1       NO
1192  SAINT LOUIS       SNT LU CC-FOREST PARK                              1       YES
1193  WEST PLAINS       SOUTH CENTRAL AREA VOC-TECH SCHOOL                 2       NO
1194  SEDALIA           STATE FAIR CMTY COLLEGE                            1       NO
1195  CPE GIRARDEAU     STHEST MO ST UNIVERSITY                            3       YES
1196  SPRINGFIELD       STHWST MO ST UNIVERSITY                            3       YES
1197  POPLAR BLUFF      THREE RIVERS CMTY COLLEGE                          3       NO
1198  TRENTON           TRENTON JUNIOR COLLEGE                             1       NO
1199  ELDON             TRI-COUNTY TECH SCHOOL                             1       NO
1200  WARRENSBURG       WARRENSBURG A V T S                                2       YES
1201  WAYNESVILLE       WAYNESVILLE A V T S                                2       NO
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 OBS    CITY           NAME                                           INSTITUTION  INS
                                                                      TYPE

 1202   LORMAN         ALCORN STATE UNIVERSITY                            3        NO
 1203   CLARKSDALE     COAHOMA JUNIOR COLLEGE                             1        NO
 1204   NATCHEZ        COPIAH-LINCOLN JR COLLEGE                          1        NO
 1205   WESSON         COPIAH-LINCOLN JR COLLEGE                          1        NO
 1206   DECATUR        EAST CENTRAL JR COLLEGE                            1        NO
 1207   SCOOBA         EAST MISS JUNIOR COLLEGE                           1        NO
 1208   COLUMBUS       GOLDEN TRIANGLE VO TECH CENTER MDT                 1        NO
 1209   UTICA          HINDS JC,UTICA                                     1        YES
 1210   JACKSON        HINDS JR COLLEGE JACKSON CAMPUS                    1        NO
 1211   RAYMOND        HINDS JUNIOR COLLEGE                               1        NO
 1212   GOODMAN        HOLMES JUNIOR COLLEGE                              1        YES
 1213   TUPELO         ITAWAMBA JUNIOR COLLEGE                            1        NO
 1214   FULTON         ITAWAMBA JUNIOR COLLEGE                            1        NO
 1215   ELLISVILLE     JONES CO JUNIOR COLLEGE                            1        NO
 1216   WEST POINT     MARY HOLMES COLLEGE                                1        NO
 1217   MERIDIAN       MERIDIAN JUNIOR COLLEGE                            1        YES
 1218   MOORHEAD       MISS DELTA JUNIOR COLLEGE                          1        YES
 1219   GAUTIER        MISS GULF COAST JUNIOR COLL., JACKSON CO           1        NO
 1220   GULFPORT       MISS GULF COAST JUNIOR COLL., JEFF DAVIS           1        NO
 1221   COLUMBUS       MISS UNIVERSITY FOR WOMEN                          3        NO
 1222   ITTA BENA      MISS VLY ST UNIVERSITY                             3        NO
 1223   LONG BEACH     MISS. GULF COAST JUNIOR COLL. WEST HARRI           1        NO
 1224   PERKINSTON     MISSISSIPPI GULF COAST JC                          1        NO
 1225   LUCEDALE       MISSISSIPPI GULF COAST JR. COLLEGE                 1        NO
 1226   GREENVILLE     MS DELTA JR COLLEGE GREENVILLE VOCATION            1        NO
 1227   GREENVILLE     MS DELTA JR COLLEGE GREENVILLE VOCATIONA           1        NO
 1228   BOONEVILLE     NORTHEAST MISS JR COLLEGE                          1        NO
 1229   SENATOBIA      NORTHWEST MISS JR COLLEGE                          1        NO
 1230   HATTIESBURG    PEARL RIVER COLLEGE--VOC-TECH CENTER               1        NO
 1231   POPLARVILLE    PEARL RIVER JR COLLEGE                             1        NO
 1232   SUMMIT         SOUTHWEST MISS JR COLLEGE                          1        YES


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OBS     CITY           NAME                                           INSTITUTION  INS
                                                                      TYPE

1233    BILLINGS       BILLINGS VOCATIONAL TECHNICAL CENTER               2        YES
1234    BROWNING       BLACKFEET CMTY COLLEGE                             1        NO
1235    BUTTE          BUTTE VOCATIONAL TECHNICAL CENTER                  2        YES
1236    HELENA         CARROLL COLLEGE                                    3        YES
1237    GLENDIVE       DAWSON COMMUNITY COLLEGE                           1        NO
1238    LAME DEER      DULL KNIFE MEMORIAL C                              1        NO
1239    KALISPELL      FLATHEAD VLY CMTY COLLEGE                          1        YES
1240    POPLAR         FORT PECK COMMUNITY COLLEGE                        1        NO
1241    GREAT FALLS    GREAT FALLS VOCATIONAL TECHNICAL CENTER            2        NO
1242    GREAT FALLS    GREAT FALLS, COLLEGE OF                            3        YES
1243    HELENA         HELENA VOCATIONAL-TECHNICAL CENTER                 2        NO
1244    MILES CITY     MILES COMMUNITY COLLEGE                            1        NO
1245    MISSOULA       MISSOULA VOCATIONAL TECHNICAL CENTER               2        NO
1246    HAVRE          NORTHERN MONTANA COLLEGE                           3        NO
1247    PABLO          SALISH KOOTENAI CMTY C                             1        NO
1248    DILLON         WESTERN MONTANA COLLEGE                            3        NO
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OBS	CITY	NAME	INSTITUTION TYPE	INS
1249	ELIZABETH CY	ALBEMARLE COLLEGE OF THE	1	YES
1250	ANSONVILLE	ANSON TECHNICAL COLLEGE	1	NO
1251	ASHEVILLE	ASHEVL BUNCOMBE TECH C	1	NO
1252	CONCORD	BARBER-SCOTIA COLLEGE	3	NO
1253	WASHINGTON	BEAUFORT CO CMTY COLLEGE	1	NO
1254	DUBLIN	BLADEN TECHNICAL INST	1	YES
1255	FLAT ROCK	BLUE RIDGE TECHNICAL C	1	NO
1256	BREVARD	BREVARD COLLEGE	1	NO
1257	SUPPLY	BRUNSWICK TECH C	2	YES
1258	LENOIR	CALDWELL CC AND TECH INST	1	YES
1259	WILMINGTON	CAPE FEAR TECHNICAL INST	1	NO
1260	MOREHEAD CITY	CARTERET TECHNICAL COL	1	YES
1261	HICKORY	CATAWBA VALLEY TECH C	1	NO
1262	SANFORD	CEN CAROLINA TECH C	1	NO
1263	CHARLOTTE	CEN PIEDMONT CMTY COLLEGE	1	YES
1264	MURFREESBORO	CHOWAN COLLEGE	1	YES
1265	SHELBY	CLEVELAND TECH COLLEGE	1	YES
1266	JACKSONVILLE	COASTAL CAROLINA CC	1	NO
1267	NEW BERN	CRAVEN COMMUNITY COLLEGE	1	NO
1268	LEXINGTON	DAVIDSON CO CMTY COLLEGE	1	YES
1269	DURHAM	DUKE UNIVERSITY	3	NO
1270	DURHAM	DURHAM TECHNICAL INST	1	YES
1271	TARBORO	EDGECOMBE TECH COLLEGE	1	NO
1272	ELON COLLEGE	ELON COLLEGE	3	NO
1273	FAYETTEVILLE	FAYETTEVILLE TECH INST	1	YES
1274	WINSTON-SALEM	FORSYTH TECHNICAL INST	1	NO
1275	BOILING SPG	GARDNER-WEBB COLLEGE	3	NO
1276	DALLAS	GASTON COLLEGE	1	NO
1277	JAMESTOWN	GUILFORD TECHNICAL CC	3	YES
1278	WELDON	HALIFAX CMTY COLLEGE	1	YES
1279	CLYDE	HAYWOOD TECHNICAL COLLEGE	1	YES
1280	SPINDALE	ISOTHERMAL CMTY COLLEGE	1	NO
1281	KENANSVILLE	JAMES SPRUNT TECH COLLEGE	1	NO
1282	SMITHFIELD	JOHNSTON TECHNICAL COL	1	YES
1283	BANNER ELK	LEES-MCRAE COLLEGE	1	NO
1284	KINSTON	LENOIR CMTY COLLEGE	1	NO
1285	LOUISBURG	LOUISBURG COLLEGE	1	NO
1286	MARS HILL	MARS HILL COLLEGE	3	NO
1287	WILLIAMSTON	MARTIN COMMUNITY COLLEGE	1	NO
1288	SPRUCE PINE	MAYLAND TECHNICAL COLLEGE	1	NO
1289	MARION	MCDOWELL TECHNICAL COL	1	NO
1290	STATESVILLE	MITCHELL CMTY COLLEGE	1	YES
1291	TROY	MONTGOMERY TECH COL	1	NO
1292	MONTREAT	MONTREAT-ANDERSON COLLEGE	1	YES
1293	MOUNT OLIVE	MOUNT OLIVE COLLEGE	1	YES
1294	ROCKY MOUNT	NASH TECHNICAL INSTITUTE	1	YES
1295	CHAPEL HILL	NC AT CHAPEL HILL, U OF	3	NO
1296	RALEIGH	NC STATE U RALEIGH	3	NO
1297	WILMINGTON	NC WILMINGTON, UNIV OF	3	NO
1298	GRANTSBORO	PAMLICO TECHNICAL C	1	NO
1299	RALEIGH	PEACE COLLEGE	1	NO
1300	ROXBORO	PIEDMONT TECHNICAL C	1	NO

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OBS     CITY          NAME                                        INSTITUTION   INS
                                                                  TYPE

1301    GREENVILLE    PITT CMTY COLLEGE                               1         NO
1302    ASHEBORO      RANDOLPH TECHNICAL C                            1         NO
1303    HAMLET        RICHMOND TECHNICAL C                            1         NO
1304    AHOSKIE       ROANOKE-CHOWAN TECH C                           1         NO
1305    LUMBERTON     ROBESON TECHNICAL COL                           1         NO
1306    WENTWORTH     ROCKINGHAM CMTY COLLEGE                         1         YES
1307    SALISBURY     ROWAN TECHNICAL COLLEGE                         1         NO
1308    CLINTON       SAMPSON TECHNICAL INST                          1         NO
1309    CARTHAGE      SANDHILLS CMTY COLLEGE                          1         NO
1310    WHITEVILLE    SOUTHEASTERN CMTY COLLEGE                       1         NO
1311    SYLVA         SOUTHWESTERN TECH C                             1         NO
1312    ALBEMARLE     STANLY TECHNICAL C                              1         NO
1313    DOBSON        SURRY COMMUNITY COLLEGE                         1         NO
1314    HAW RIVER     TECH C OF ALAMANCE                              1         YES
1315    MURPHY        TRI-COUNTY CMTY COLLEGE                         1         NO
1316    HENDERSON     VANCE-GRANVL CMTY COLLEGE                       1         NO
1317    RALEIGH       WAKE TECHNICAL COLLEGE                          1         NO
1318    BOONE         WATAUGA DIVISION-CALDWELL COMMUNITY COL         1         NO
1319    BOONE         WATAUGA DIVISION-CALDWELL COMMUNITY COLL        1         NO
1320    GOLDSBORO     WAYNE COMMUNITY COLLEGE                         1         YES
1321    MORGANTON     WESTERN PIEDMONT CC                             1         NO
1322    WILKESBORO    WILKES COMMUNITY COLLEGE                        1         NO
1323    WILSON        WILSON CO TECHNICAL INST                        1         NO
1324    WINGATE       WINGATE COLLEGE                                 3         NO


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     OBS      CITY              NAME                           INSTITUTION    INS
                                                               TYPE

     1325     BISMARCK          BISMARCK JUNIOR COLLEGE             1         YES
     1326     DICKINSON         DICKINSON STATE COLLEGE             3         NO
     1327     DEVILS LAKE       LAKE REGION CMTY COLLEGE            1         YES
     1328     BISMARCK          MARY COLLEGE                        3         YES
     1329     MAYVILLE          MAYVILLE STATE COLLEGE              3         NO
     1330     MINOT             MINOT STATE COLLEGE                 3         NO
     1331     WAHPETON          ND STATE SCHOOL SCIENCE             1         YES
     1332     BOTTINEAU         ND STATE U BOTTINEAU                1         NO
     1333     FARGO             ND STATE U MAIN CAMPUS              3         NO
     1334     WILLISTON         ND WILLISTON BRANCH U OF            1         YES
     1335     BELCOURT          TURTLE MOUNTAIN CMTY COL            1         NO
     1336     VALLEY CITY       VALLEY CITY STATE COLLEGE           3         NO
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OBS      CITY          NAME                                        INSTITUTION   INS
                                                                   TYPE

1337   GRAND ISLAND   CENTRAL CMTY COLLEGE - GRAND ISLAND               1        YES
1338   HASTINGS       CENTRAL COMMUNITY COLLEGE - HASTINGS CAM          1        NO
1339   COLUMBUS       CENTRAL COMMUNITY COLLEGE PLATTE CAMPUS           1        NO
1340   CHADRON        CHADRON STATE COLLEGE                             3        NO
1341   MCCOOK         MCCOOK COMMUNITY COLLEGE                          1        NO
1342   OMAHA          METROPOLITAN TECH CC AREA                         1        YES
1343   NORTH PLATTE   MID PLAINS CC AREA                                1        NO
1344   FREMONT        MIDLAND LUTHERAN COLLEGE                          3        NO
1345   WINNEBAGO      NEBRASKA INDIAN CC                                1        NO
1346   LINCOLN        NEBRASKA WESLEYAN UNIV                            3        NO
1347   LINCOLN        NEBRASKA-LINCOLN U OF                             3        NO
1348   NORFOLK        NORTHEAST TECH CC AREA                            1        NO
1349   PERU           PERU STATE COLLEGE                                3        NO
1350   OMAHA          SAINT MARY, COLLEGE OF                            3        YES
1351   LINCOLN        SOUTHEAST COMMUNITY COLLEGE LINCOLN CAMP          1        NO
1352   MILFORD        SOUTHEAST COMMUNITY COLLEGE MILFORD CAMP          1        NO
1353   LINCOLN        STHESTN NE TECH CC AREA                           1        NO
1354   LINCOLN        UNION COLLEGE                                     3        NO
1355   CURTIS         UNIVERSITY OF NEBRASKA                            3        NO
1356   SIDNEY         WESTERN NE TECH CC                                1        YES
1357   SIDNEY         WESTERN NEB TECH SCH                              1        NO
1358   SIDNEY         WESTERN NEBRASKA TECHNICAL COLLEGE                2        NO
1359   SCOTTSBLUFF    WESTERN TECHNICAL CC AREA                         1        NO

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OBS      CITY          NAME                                        INSTITUTION   INS
                                                                   TYPE

1360   WINDAHAM       CASTLE JUNIOR COLLEGE                             1        YES
1361   NEW LONDON     COLBY-SAWYER COLLEGE                              3        YES
1362   NASHUA         DANIEL WEBSTER COLLEGE                            3        YES
1363   NASHUA         FRANKLIN PIERCE COLLEGE                           3        NO
1364   DOVER          FRANKLIN PIERCE COLLEGE                           3        NO
1365   ANTRIM         HAWTHORNE COLLEGE                                 3        YES
1366   LEBANON        LEBANON COLLEGE                                   1        NO
1367   MANCHESTER     NEW HAMPSHIRE COLLEGE                             3        NO
1368   LACONIA        NEW HAMPSHIRE COLLEGE - LACONIA CENTER            3        NO
1369   PORTSMOUTH     NEW HAMPSHIRE COLLEGE EXT                         3        YES
1370   SALEM          NEW HAMPSHIRE COLLEGE SALEM CENTER                3        NO
1371   DURHAM         NEW HAMPSHIRE U OF                                3        NO
1372   KEENE          NH KEENE ST COLLEGE U OF                          3        NO
1373   MANCHESTER     NH MERRIMACK VALLEY COLLEGE                       3        NO
1374   PLYMOUTH       NH PLYMOUTH ST COLLEGE U                          3        NO
1375   CONCORD        NH TECHNICAL INSTITUTE                            2        YES
1376   BERLIN         NH VOC-TECH C BERLIN                              1        YES
1377   CLAREMONT      NH VOC-TECH C CLAREMONT                           1        NO
1378   LACONIA        NH VOC-TECH C LACONIA                             1        NO
1379   MANCHESTER     NH VOC-TECH C MANCHESTER                          1        YES
1380   NASHUA         NH VOC-TECH C NASHUA                              1        NO
1381   STRATHAM       NH VOC-TECH C STRATHAM                            2        YES
1382   MANCHESTER     NOTRE DAME COLLEGE                                3        NO
1383   NASHUA         RIVIER COLLEGE                                    3        YES
1384   MANCHESTER     SAINT ANSELM COLLEGE                              3        NO
1385   CHESTER        WHITE PINES COLLEGE                               3        YES
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OBS	CITY	NAME	INSTITUTION TYPE	INS
1386	MAYS LANDING	ATLANTIC CMTY COLLEGE	1	YES
1387	MAYS LANDING	ATLANTIC COUNTY AREA VOC-TECH SCHOOL	2	YES
1388	HACKENSACK	BERGEN CO VOCATIONAL TECH HIGH SCHOOL	2	NO
1389	PARAMUS	BERGEN COMMUNITY COLLEGE	1	NO
1390	HACKENSACK	BERGEN TECHNICAL TRAINING CTR	2	NO
1391	LINCROFT	BROOKDALE CMTY COLLEGE	1	NO
1392	MONT HOLLY	BURLINGTON CO VOC-TECH SCHOOL	2	NO
1393	PEMBERTON	BURLINGTON COUNTY COLLEGE	1	NO
1394	BLACKWOOD	CAMDEN COUNTY COLLEGE	1	NO
1395	SICKLERVILLE	CAMDEN CTY A V T S-GLOUCESTER	2	YES
1396	CAPE MAY COURTH	CAPE MAY COUNTY VO-TECH SCHOOL	2	NO
1397	HACKETTSTOWN	CENTENARY COLLEGE	3	YES
1398	RANDOLPH	COUNTY COLLEGE OF MORRIS	1	YES
1399	VINELAND	CUMBERLAND COUNTY COLLEGE	1	NO
1400	BRIDGETON	CUMBERLAND CTY A V T S	2	NO
1401	NEWARK	ESSEX COUNTY COLLEGE	1	NO
1402	NEWARK	ESSEX CTY TECH CAREER CTR	2	NO
1403	TEANECK	FARLGH DCKSN UNIV TEANECK	3	NO
1404	N PLAINFIELD	FINANCIAL FLEX PLANNING SCHOOL	1	NO
1405	MADISON	FRLGH DKSN FLOR-MAD CAM	3	NO
1406	SEWELL	GLOUCESTER COUNTY AREA VOC-TECH SCHOOL	2	YES
1407	SEWELL	GLOUCESTER COUNTY COLLEGE	1	NO
1408	JERSEY CITY	HUDSON CO CC	1	NO
1409	TRENTON	MERCER CO CMTY COLLEGE	1	YES
1410	TRENTON	MERCER CTY VO-TECH SCH	2	NO
1411	EDISON	MIDDLESEX COUNTY COLLEGE	1	NO
1412	NEW BRUNSWICK	MIDDLESEX CTY A V T S	2	YES
1413	WOODBRIDGE	MIDDLESEX CTY A V T S	2	NO
1414	W LONG BRANCH	MONMOUTH COLLEGE	3	YES
1415	MIDDLETOWN	MONMOUTH CTY A V T S	2	NO
1416	MARLBORO	MONMOUTH CTY A V T S	2	NO
1417	MIDDLETOWNN	MONMOUTH CTY A V T S	2	NO
1418	DENVILLE	MORRIS CO VOCATIONAL & TECHN SCHL	2	NO
1419	MERCHANTVILLE	NEW AMERICANS LEARNING CENTER	1	NO
1420	NEWARK	NJ INSTITUTE TECHNOLOGY	3	YES
1421	ANNANDALE	NORTH HUNTERDON REG A V T S	2	NO
1422	BRICKTOWN	OCEAN COUNTY A V T S	2	YES
1423	TOMS RIVER	OCEAN COUNTY COLLEGE	1	YES
1424	JACKSON	OCEAN CTY A V T S	2	YES
1425	TOMS RIVER	OCEAN CTY CO-TECH SCHOOL, ADLT DIV	2	NO
1426	DEMAREST	OLD CHURCH CULTURAL CENTER	1	NO
1427	PATERSON	PASSAIC CO CMTY COLLEGE	1	NO
1428	LAWRENCEVILLE	RIDER COLLEGE	3	YES
1429	JERSEY CITY	SAINT PETERS COLLEGE	3	NO
1430	CARNEYS POINT	SALEM COMMUNITY COLLEGE	1	YES
1431	WOODSTOWN	SALEM COUNTY VOCATIONAL CAREER CENTER	1	YES
1432	SOMERVILLE	SOMERSET COUNTY COLLEGE	1	YES
1433	BRIDGEWATER	SOMERSET COUNTY TECH INSTITUTE	1	YES
1434	SPARTA	SUSSEX COUNTY VOCATIONAL/TECHNCIAL SCHOO	2	NO
1435	SPARTA	SUSSEX CTY V-T SCHOOL	2	NO
1436	TRENTON	THOMAS A EDISON STATE COLLEGE	3	YES
1437	CRANFORD	UNION COUNTY COLLEGE	1	YES

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---------------------------------- STATE=NJ ----------------------------------------

          OBS         CITY          NAME                          INSTITUTION    INS
                                                                  TYPE

          1438    EAST ORANGE    UPSALA COLLEGE                       3          YES
          1439    WASHINGTON     WARREN CTY A V T S                   2          NO




---------------------------------- STATE=NM ----------------------------------------

OBS       CITY        NAME                                         INSTITUTION  INS
                                                                   TYPE

1440  ALBUQUERQUE  ALBUQUERQUE TECHNICAL-VOCATIONAL INSTITU             2        NO
1441  LAS CRUCES   DONA ANA BRANCH COMMUNITY COLLEGE                    2        NO
1442  CLOVIS       EASTERN NEW MEXICO UNIVERSITY--CLOVIS CA             3        NO
1443  PORTALES     EASTERN NM U MAIN CAMPUS                             3        NO
1444  ROSWELL      EASTERN NM U ROSWELL                                 1        NO
1445  LAS VEGAS    LUNA AREA VOC SCHOOL                                 2        NO
1446  SPRINGER     LUNA VOC-TECH INSTITUTE                              2        YES
1447  SANTA ROSA   LUNA VOC-TECH INSTITUTE                              2        NO
1448  LAS VEGAS    NEW MEXICO HIGHLANDS U                               3        NO
1449  HOBBS        NEW MEXICO JUNIOR COLLEGE                            1        NO
1450  GALLUP       NM GALLUP BRANCH,U OF                                3        NO
1451  ALBUQUERQUE  NM MAIN CAMPUS, UNIV OF                              3        NO
1452  ALAMOGORDO   NM STATE U ALAMOGORDO                                3        NO
1453  CARLSBAD     NM STATE U CARLSBAD                                  3        NO
1454  GRANTS       NM STATE U GRANTS BRANCH                             3        NO
1455  LAS CRUCES   NM STATE U MAIN CAMPUS                               3        NO
1456  EL RITO      NORTHERN NEW MEXICO CC                               1        NO
1457  FARMINGTON   SAN JUAN COLLEGE                                     1        YES
1458  SANTA FE     SANTA FE COMMUNITY COL                               1        NO
1459  SANTA FE     SANTA FE, COLLEGE OF                                 3        NO
1460  ALBUQUERQUE  SOUTHWESTERN INDIAN POLYTECHNIC INSTITUT             2        NO
1461  TUCUMCARI    TUCUMCARI AREA VOCATIONAL SCHOOL                     2        NO
1462  SILVER CITY  WESTERN NM UNIVERSITY                                3        NO




---------------------------------- STATE=NV ----------------------------------------

      OBS      CITY              NAME                           INSTITUTION    INS
                                                                TYPE

      1463     LAS VEGAS         CLARK CO CMTY COLLEGE              1          YES
      1464     LAS VEGAS         NEVADA-LAS VEGAS, UNIV OF          3          NO
      1465     RENO              NEVADA-RENO, UNIV OF               3          NO
      1466     ELKO              NORTHERN NEV CMTY COLLEGE          1          YES
      1467     RENO              TRUCKEE MEADOWS CC                 1          YES
      1468     CARSON CITY       WESTERN NEVADA CMTY COL            1          NO
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------------------------------------ STATE=NY ------------------------------------

OBS   CITY            NAME                                         INSTITUTION  INS
                                                                   TYPE

1469  GLENS FALLS     ADIRONDACK CMTY COLLEGE                           1       NO
1470  NEW YORK        ASSOC DEGREE PRG PRATT MANHATTAN CTR              3       YES
1471  NEW YORK        BRAMSON ORT TECH INST                             2       YES
1472  BINGHAMTON      BROOME COMMUNITY COLLEGE                          1       NO
1473  AUBURN          CAYUGA CO CMTY COLLEGE                            1       NO
1474  CAZENOVIA       CAZENOVIA COLLEGE                                 3       NO
1475  PLATTSBURGH     CLINTON COMMUNITY COLLEGE                         1       YES
1476  NEW YORK        COLUMBIA U CENTRAL OFF                            3       NO
1477  HUDSON          COLUMBIA-GREENE CC                                1       NO
1478  BRONXVILLE      CONCORDIA COLLEGE                                 3       NO
1479  NEW YORK        COOPER UNION                                      3       NO
1480  CORNING         CORNING COMMUNITY COLLEGE                         1       YES
1481  NEW YORK        CUNY BORO OF MANHATTAN CC                         1       NO
1482  BRONX           CUNY BRONX CMTY COLLEGE                           1       NO
1483  STATEN ISLAND   CUNY C OF STATEN ISLAND                           1       NO
1484  BRONX           CUNY HOSTOS CMTY COLLEGE                          1       NO
1485  BROOKLYN        CUNY KINGSBOROUGH CC                              1       YES
1486  LONG IS CY      CUNY LA GUARDIA CC                                1       NO
1487  BROOKLYN        CUNY MEDGAR EVERS COLLEGE                         1       NO
1488  BROOKLYN        CUNY NEW YORK CITY TECH C                         1       NO
1489  NEW YORK        CUNY QUEENSBOROUGH CC                             1       NO
1490  POUGHKEEPSIE    DUTCHESS CMTY COLLEGE                             1       NO
1491  YONKERS         ELIZABETH SETON COLLEGE                           3       NO
1492  ELMIRA          ELMIRA COLLEGE                                    3       YES
1493  BUFFALO         ERIE CC CITY CAMPUS                               1       YES
1494  WILLIAMSVILLE   ERIE CC NORTH CAMPUS                              1       NO
1495  ORCHARD PARK    ERIE CC SOUTH CAMPUS                              1       YES
1496  NEW YORK        FASHION INST TECHNOLOGY                           3       YES
1497  CANANDAIGUA     FINGER LAKES,CMTY COLLEGE                         1       YES
1498  JOHNSTOWN       FULTON-MONTGOMERY CC                              1       NO
1499  BATAVIA         GENESEE COMMUNITY COLLEGE                         1       YES
1500  HERKIMER        HERKIMER CO CMTY COLLEGE                          1       YES
1501  HAMBURG         HILBERT COLLEGE                                   1       NO
1502  HOUGHTON        HOUGHTON COLLEGE                                  3       NO
1503  TROY            HUDSON VLY CMTY COLLEGE                           1       YES
1504  OLEAN           JAMESTOWN CMTY COL, CATTARANGES CNTY BR           1       YES
1505  JAMESTOWN       JAMESTOWN CMTY COLLEGE                            1       NO
1506  WATERTOWN       JEFFERSON CMTY COLLEGE                            1       NO
1507  BROOKLYN        LONG IS U BROOKLYN CAMPUS                         3       YES
1508  GREENVALE       LONG IS U C W POST CENTER                         3       NO
1509  ALBANY          MARIA COLLEGE OF ALBANY                           1       YES
1510  SYRACUSE        MARIA REGINA COLLEGE                              1       YES
1511  POUGHKEEPSIE    MARIST COLLEGE                                    3       YES
1512  NEW YORK        MARYMOUNT MANHATTAN C                             3       NO
1513  OGDENSBURG      MATER DEI COLLEGE                                 1       NO
1514  VALHALLA        MID WESTCHESTER CENTER FOR OCCUPATIONAL           2       YES
1515  UTICA           MOHAWK VLY CMTY COLLEGE                           1       YES
1516  ROCHESTER       MONROE COMMUNITY COLLEGE                          1       NO
1517  NEW YORK        N Y C COMM COLL VOORHEES CAMPUS                   3       YES
1518  GARDEN CITY     NASSAU COMMUNITY COLLEGE                          1       NO
1519  NEW YORK        NEW YORK UNIVERSITY                               3       NO
1520  SANBORN         NIAGARA CO CMTY COLLEGE                           1       NO
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------------------------------- STATE=NY -------------------------------

OBS	CITY	NAME	INSTITUTION TYPE	INS
1521	NIAGARA FALLS	NIAGARA UNIVERSITY	3	YES
1522	SARANAC LAKE	NORTH COUNTRY CMTY COLLEGE	1	NO
1523	ELIZABETHTOWN	NORTH COUNTRY COMMUNITY COLL AT ELIZABE	1	YES
1524	ELIZABETHTOWN	NORTH COUNTRY COMMUNITY COLL AT ELIZABET	1	NO
1525	OLD WESTBURY	NY INST TECHN MAIN CAMPUS	1	NO
1526	NEW YORK	NY INST TECHN NY CTY CAM	3	NO
1527	NEW YORK	NY SCH OF INTERIOR DESIGN	3	NO
1528	SYRACUSE	ONONDAGA CMTY COLLEGE	1	YES
1529	MIDDLETOWN	ORANGE CO CMTY COLLEGE	1	NO
1530	PLEASANTVILLE	PACE U PLSNTVL-BRCLF CAM	3	NO
1531	WHITE PLAINS	PACE U WHITE PLAINS CAM	3	NO
1532	NEW YORK	PACE UNIVERSITY NEW YORK	3	NO
1533	NEW YORK	PARSONS SCHOOL OF DESIGN	3	YES
1534	PAUL SMITHS	PAUL SMITH'S C ARTS & SCI	1	NO
1535	ROCHESTER	ROCHESTER INST TECHNOLOGY	3	YES
1536	SUFFERN	ROCKLAND CMTY COLLEGE	1	NO
1537	ALBANY	RUSSELL SAGE JC OF ALBANY	1	NO
1538	BROOKLYN	SAINT FRANCIS COLLEGE	3	NO
1539	SCHENECTADY	SCHENECTADY COUNTY CC	1	NO
1540	JAMAICA	ST. JOHN'S UNIV, NEW YORK	3	NO
1541	ALBANY	STATE U NEW YORK SYS OFF	3	NO
1542	RIVERHEAD	SUFFOLK CO CC ESTN CAM	1	YES
1543	SELDEN	SUFFOLK CO CC SELDEN CAM	1	NO
1544	BRENTWOOD	SUFFOLK CO CC WSTN CAM	1	YES
1545	LOCH SHLDRAKE	SULLIVAN CO CMTY COLLEGE	1	NO
1546	HEMPSTEAD	SUNY EDUCATIONAL OPPORTUNITY, CENTER OF	3	NO
1547	ALFRED	SUNY AGRL & TECH C ALFRED	1	NO
1548	CANTON	SUNY AGRL & TECH C CANTON	1	YES
1549	DELHI	SUNY AGRL & TECH C DELHI	1	YES
1550	COBLESKILL	SUNY AGRL TECH C COBLESKL	1	NO
1551	FARMINGDALE	SUNY AGRL TECH C FARMNGDL	1	NO
1552	MORRISVILLE	SUNY AGRL TECH C MORRISVL	1	YES
1553	BUFFALO	SUNY AT BUFFALO MAIN CAM	3	NO
1554	SARATOGA SPG	SUNY EMPIRE STATE COLLEGE	3	NO
1555	DRYDEN	TOMPKINS-CORTLAND CC	1	NO
1556	BUFFALO	TROCAIRE COLLEGE	1	NO
1557	STONE RIDGE	ULSTER CO CMTY COLLEGE	1	YES
1558	BUFFALO	VILLA MARIA COLLEGE BFLO	1	YES
1559	VALHALLA	WESTCHESTER CMTY COLLEGE	1	YES

STATE=OH

OBS	CITY	NAME	INSTITUTION TYPE	INS
1560	NILES	A. T. E. S. TECH INST	2	NO
1561	AKRON	AKRON ADULT VOCATIONAL SERVICES	2	NO
1562	AKRON	AKRON MAIN CAMPUS,U OF	3	NO
1563	ORRVILLE	AKRON WAYNE GEN-TECH C, U	1	NO
1564	ASHLAND	ASHLAND CO WEST HOME JOINT VOCATIONAL SC	2	NO
1565	ASHLAND	ASHLAND COLLEGE	3	NO
1566	JEFFERSON	ASHTABULA COUNTY JOINT VOCATIONAL SCHOO	2	YES
1567	JEFFERSON	ASHTABULA COUNTY JOINT VOCATIONAL SCHOOL	2	NO
1568	PAINESVILLE	AUBURN CAREER CENTER	2	NO
1569	ST CLAIRSVL	BELMONT TECHNICAL COLLEGE	1	NO
1570	HURON	BOWLING GRN ST U FIRELDS	1	YES
1571	BOWLING GREEN	BOWLING GRN ST U MAIN CAM	3	YES
1572	HAMILTON	BUTLER COUNTY JVS DISTRICT D RUSSEL LEE	2	NO
1573	NEWARK	CENTRAL OHIO TECHNICAL C	1	NO
1574	CINCINNATI	CINCINNATI TECH COLLEGE	1	NO
1575	BATAVIA	CINN CLERMNT GEN-TECH, U	1	NO
1576	BLUE ASH	CINN RAYMND WLTERS C, U	3	NO
1577	SPRINGFIELD	CLARK TECHNICAL COLLEGE	1	NO
1578	LISBON	COLUMBIANA COUNTY JOINT VOCATIONAL SCHO	2	NO
1579	LISBON	COLUMBIANA COUNTY JOINT VOCATIONAL SCHOO	2	NO
1580	COLUMBUS	COLUMBUS TECHNICAL INST	1	NO
1581	CLEVELAND	CUYAHOGA CC DISTRICT	1	YES
1582	PARMA	CUYAHOGA CC-WESTERN CAMPUS	1	NO
1583	DAYTON	DAYTON ADULT TRAINING/ EDUCATIONAL CENT	2	YES
1584	DAYTON	DAYTON ADULT TRAINING/ EDUCATIONAL CENTE	2	NO
1585	DAYTON	DAYTON PUBLIC NIGHT SCHOOL	2	NO
1586	DAYTON	DAYTON, UNIVERSITY OF	3	NO
1587	DEFIANCE	DEFIANCE COLLEGE	3	NO
1588	CINNCINATI	DIAMOND OAKS CAREER CTR	2	NO
1589	CLEVELAND	DYKE COLLEGE	3	YES
1590	PIQUA	EDISON STATE CMTY COLLEGE	1	NO
1591	MILAN	EHOVE JOINT VOCATIONAL SCHOOL	2	YES
1592	FINDLAY	FINDLAY COLLEGE	3	NO
1593	ARCHBOLD	FOUR CTY J V S	2	NO
1594	COLUMBUS	FRANKLIN UNIVERSITY	3	NO
1595	DAYTON	GARFIELD SKILLS CTR	2	NO
1596	NELSONVILLE	HOCKING TECHNICAL COLLEGE	1	NO
1597	STEUBENVILLE	JEFFERSON TECHNICAL C	1	YES
1598	ASHTABULA	KENT ST ASHTABULA REG CAM	3	NO
1599	E LIVERPOOL	KENT ST E LIVERPL REG CAM	3	NO
1600	WARREN	KENT ST TRUMBULL REG CAM	3	NO
1601	NEW PHILA	KENT ST TUSCARAWS REG CAM	3	NO
1602	SALEM	KENT ST U SALEM REG CAM	3	YES
1603	KENT	KENT STATE U MAIN CAMPUS	3	NO
1604	BURTON	KENT STATE UNIVERSITY GEAUGA CAMPUS	3	NO
1605	MENTOR	LAKELAND CMTY COLLEGE	1	YES
1606	WILMINGTON	LAUREL OAKS CAREER DEVELOPMENT CAMPUS	2	NO
1607	CHESAPEAKE	LAWRENCE COUNTY JOINT VOCATIONAL SCHOOL	2	YES
1608	LIMA	LIMA TECHNICAL COLLEGE	1	YES
1609	MILFORD	LIVE OAKS CAREER DEVELOPMENT CAMPUS	2	NO
1610	ELYRIA	LORAIN CO CMTY COLLEGE	1	NO
1611	SYLVANIA	LOURDES COLLEGE	3	NO

------------------------------- STATE=OH -------------------------------

OBS	CITY	NAME	INSTITUTION TYPE	INS
1612	CANTON	MALONE COLLEGE	3	NO
1613	MARION	MARION TECHNICAL COLLEGE	1	NO
1614	MEDINA	MEDINA COUNTY VOCATIONAL CENTER	2	NO
1615	HAMILTON	MIAMI U HAMILTON CAMPUS	3	NO
1616	MIDDLETOWN	MIAMI U MIDDLETOWN CAMPUS	3	NO
1617	CLAYTON	MONTGOMERY COUNTY JOINT VOCATIONAL SCHOO	2	NO
1618	MOUNT VERNON	MOUNT VERNON NAZARENE C	3	YES
1619	MT ST JOSEPH	MT SNT JOS-ON-THE-OHIO,C	3	YES
1620	ZANESVILLE	MUSKINGUM AREA TECH C	2	NO
1621	COLUMBUS	NHAW HOME STUDY INSTITUTE	2	YES
1622	MANSFIELD	NORTH CEN TECH COLLEGE	1	YES
1623	ARCHBOLD	NORTHWEST TECH COLLEGE	1	YES
1624	CLEVELAND	NOTRE DAME COLLEGE	3	NO
1625	COLUMBUS	OHIO DOMINICAN COLLEGE	3	NO
1626	WOOSTER	OHIO ST U AGRL TECH INST	3	NO
1627	COLUMBUS	OHIO STATE U MAIN CAMPUS	3	NO
1628	CHILLICOTHE	OHIO U CHILLICOTHE BR	3	YES
1629	LANCASTER	OHIO U LANCASTER BRANCH	3	NO
1630	ATHENS	OHIO U MAIN CAMPUS	3	YES
1631	ZANESVILLE	OHIO U ZANESVILLE BRANCH	3	NO
1632	WESTERVILLE	OTTERBEIN COLLEGE	3	YES
1633	TOLEDO	OWENS TECHNICAL COLLEGE	1	YES
1634	PERRYSBURG	PENTA CTY J V S	2	NO
1635	CINCINNATI	QUEEN CITY VOCATIONAL CENTER	2	NO
1636	RIO GRANDE	RIO GRANDE COLLEGE	3	YES
1637	CINCINNATI	SCARLET OAKS CAREER DEV CAMPUS	2	NO
1638	PORTSMOUTH	SHAWNEE ST CMTY COLLEGE	1	NO
1639	DAYTON	SINCLAIR CMTY COLLEGE	1	YES
1640	CANTON	STARK TECHNICAL COLLEGE	1	NO
1641	STEUBENVILLE	STEUBENVILLE, U OF	3	NO
1642	HILLSBORO	STHN ST CMTY COL	1	YES
1643	FREMONT	TERRA TECHNICAL COLLEGE	1	NO
1644	TIFFIN	TIFFIN UNIVERSITY	3	YES
1645	TOLEDO	TOLEDO,UNIVERSITY OF	3	NO
1646	NELSONVILLE	TRI-COUNTY VOCATIONAL SCHOOL	2	NO
1647	PIQUA	UPPER VALLEY JOINT VOCATIONAL SCHOOL	2	YES
1648	CLEVELAND	URSULINE COLLEGE	3	NO
1649	MARIETTA	WASHINGTON TECH COLLEGE	1	NO
1650	CELINA	WRIGHT ST U WSTN OHIO BR	1	NO
1651	CINCINNATI	XAVIER UNIVERSITY	3	YES
1652	YOUNGSTOWN	YOUNGSTOWN ST UNIVERSITY	3	YES

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----------------------------------- STATE=OK -----------------------------------

OBS   CITY             NAME                                         INSTITUTION  INS
                                                                    TYPE

1653  MUSKOGEE         BACONE COLLEGE                                   3         NO
1654  LAWTON           CAMERON UNIVERSITY                               3         NO
1655  EL RENO          CANADIAN VALLEY A V T S                          2         YES
1656  POTEAU           CARL ALBERT JR COLLEGE                           1         NO
1657  DRUMRIGHT        CENTRAL OKLA A V T S                             2         NO
1658  SAPULPA          CENTRAL OKLA A V T S                             2         NO
1659  EDMOND           CENTRAL STATE UNIVERSITY                         3         NO
1660  WARNER           CONNORS STATE COLLEGE                            1         NO
1661  WILBURTON        EASTERN OKLA ST COLLEGE                          1         NO
1662  EL RENO          EL RENO JUNIOR COLLEGE                           1         NO
1663  OKLA CITY        FOSTER ESTES A V T S                             2         NO
1664  OKLAHOMA CITY    FRANCIS TUTTLE AREA VO TECH CTR                  2         YES
1665  SHAWNEE          GORDON COOPER A V T S                            2         NO
1666  LAWTON           GREAT PLAINS AREA VOCATIONAL-TECHNICAL S         2         NO
1667  MUSKOGEE         INDIAN CAPITAL A V T S                           2         NO
1668  STILLWATER       INDIAN MERIDIAN A V T S                          2         NO
1669  POTEAU           KIAMICHI A V T S                                 2         YES
1670  POTEAU           KIAMICHI A V T S                                 2         NO
1671  ATOKA            KIAMICHI AREA VO TECH ATOKA CAMPUS               2         NO
1672  DURANT           KIAMICHI AREA VOCATIONAL TECHNICAL SCHO          2         NO
1673  DURANT           KIAMICHI AREA VOCATIONAL TECHNICAL SCHOO         2         NO
1674  MC ALESTER       KIAMICHI AREA VOCATIONAL-TECHNICAL SCHO          2         YES
1675  MC ALESTER       KIAMICHI AREA VOCATIONAL-TECHNICAL SCHOO         2         NO
1676  TALIHINA         KIAMICHI AREA VOCATIONAL-TECHNICAL SCHOO         2         NO
1677  SPIRO            KIAMICHIA AREA VO TECH                           2         NO
1678  WAYNE            MID-AMERICA A V T S                              2         YES
1679  OKLA CITY        MID-DEL A V T S                                  2         YES
1680  TISHOMINGO       MURRAY STATE COLLEGE                             3         NO
1681  AFTON            NORTHEAST OKLAHOMA AREA VOC-TECH SCHOO-          2         YES
1682  AFTON            NORTHEAST OKLAHOMA AREA VOC-TECH SCHOO--         2         NO
1683  PRYOR            NORTHEAST OKLAHOMA AREA VOC-TECH SCHOOL          2         NO
1684  TAHLEQUAH        NORTHEASTERN OKLA STATE U                        3         NO
1685  TONKAWA          NORTHERN OKLAHOMA COLLEGE                        1         YES
1686  MIAMI            NTHESTN OKLA AGRL-MECH C                         3         NO
1687  ENID             O T AUTRY A V T S                                2         NO
1688  OKLA CITY        OKLA ADULT V-T TRAINING                          2         NO
1689  STILLWATER       OKLA STATE U MAIN CAMPUS                         3         NO
1690  OKLAHOMA CITY    OKLAHOMA ADULT VOC-TECH TRAINING CENTER          2         NO
1691  OKLAHOMA CITY    OKLAHOMA CITY CMTY COLLEG                        1         NO
1692  FAIRVIEW         OKLAHOMA NORTHWEST AREA VO TECH-FAIRVIEW         2         NO
1693  OKMULGEE         OKLAHOMA STATE UNIVERSITY SCHOOL OF TECH         3         NO
1694  TULSA            PEORIA CAMPUS                                    2         NO
1695  PONCA CITY       PIONEER A V T S                                  2         NO
1696  DUNCAN           RED RIVER A V T S                                2         YES
1697  CLAREMORE        ROGERS STATE COLLEGE                             1         YES
1698  MIDWEST CITY     ROSE STATE COLLEGE                               1         NO
1699  SAYRE            SAYRE JUNIOR COLLEGE                             1         YES
1700  SEMINOLE         SEMINOLE JUNIOR COLLEGE                          1         YES
1701  ARDMORE          SOUTHERN OKLA A V T S                            2         YES
1702  BARTLESVILLE     TRI-COUNTY AREA VOCATIONAL-TECHNICAL SCH         2         NO
1703  TULSA            TULSA COUNTY AREA VOCATIONAL-TECHNICAL S         2         NO
1704  BROKEN ARROW     TULSA COUNTY VO TECH SOUTHEAST CAMPUS            2         NO
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   OBS      CITY                         NAME                     INSTITUTION     INS
                                                                  TYPE

   1705     TULSA          TULSA COUNTY VOC TECH SCHOOL                2          NO
   1706     TULSA          TULSA JUNIOR COLLEGE                        1          YES
   1707     TAHLEQUAH      W P WILLIS SKILL CENTER                     2          NO
   1708     BURNS FLAT     WESTERN OKLA A V T S                        2          NO
   1709     ALTUS          WESTERN OKLAHOMA STATE C                    1          YES




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   OBS      CITY              NAME                                INSTITUTION     INS
                                                                  TYPE

   1710     PENDLETON         BLUE MTN CMTY COLLEGE                    1          YES
   1711     BEND              CENTRAL OREG CMTY COLLEGE                1          YES
   1712     SALEM             CHEMEKETA CMTY COLLEGE                   1          NO
   1713     OREGON CITY       CLACKAMAS CMTY COLLEGE                   1          YES
   1714     ASTORIA           CLATSOP COMMUNITY COLLEGE                1          NO
   1715     LA GRANDE         EASTERN OREGON ST COLLEGE                3          YES
   1716     EUGENE            LANE COMMUNITY COLLEGE                   1          YES
   1717     ALBANY            LINN-BENTON CMTY COLLEGE                 1          NO
   1718     GRESHAM           MOUNT HOOD CMTY COLLEGE                  1          NO
   1719     KLAMATH FALLS     OREGON INST OF TECHNOLOGY                3          NO
   1720     PORTLAND          PORTLAND CMTY COLLEGE                    1          NO
   1721     GRANTS PASS       ROGUE COMMUNITY COLLEGE                  1          NO
   1722     ASHLAND           STHN OREGON ST COLLEGE                   3          NO
   1723     COOS BAY          STHWSTN OREG CMTY COLLEGE                1          NO
   1724     ONTARIO           TREASURE VLY CMTY COLLEGE                1          YES
   1725     ROSEBURG          UMPQUA COMMUNITY COLLEGE                 1          YES
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OBS	CITY	NAME	INSTITUTION TYPE	INS
1726	PITTSBURGH	ALLEG CO ALLEG CAM, CC	1	NO
1727	MONROEVILLE	ALLEG CO BOYCE CAM, CC	1	NO
1728	WEST MIFFLIN	ALLEGHENY CO SOUTH CAM,CC	1	YES
1729	CAMBRIDGE SPG	ALLIANCE COLLEGE	3	NO
1730	ALTOONA	ALTOONA AREA VOC-TECH SCH PRAC NURS PRO	2	YES
1731	ALTOONA	ALTOONA AREA VOC-TECH SCH PRAC NURS PROG	2	NO
1732	READING	ALVERNIA COLLEGE	3	NO
1733	PHILADELPHIA	AMERICAN BUSINESS INSTITUTE	2	NO
1734	MONACA	BEAVER CO,CMTY COLLEGE OF	1	NO
1735	MONACA	BEAVER CTY A V T S	2	NO
1736	PHILADELPHIA	BEREAN INSTITUTE	2	NO
1737	PITTSBURGH	BIDWELL CULTURAL & TRAINING CENTER INC	2	NO
1738	NEWTOWN	BUCKS COUNTY CMTY COLLEGE	1	YES
1739	BUTLER	BUTLER CO CMTY COLLEGE	1	NO
1740	CALIFORNIA	CALIFORNIA UNIV OF PA	3	YES
1741	JIM THORPE	CARBON CTY A V T S	2	YES
1742	PITTSBURGH	CC ALLEGHENY CO CNTR-NOR	1	NO
1743	NORRISTOWN	CENT MONTGOMERY CTY A V T S	2	YES
1744	OIL CITY	CLARION U-PA VENANGO CAM	1	NO
1745	CLEARFIELD	CLEARFIELD COUNTY VOC-TECH SCHOOL	2	NO
1746	PITTSBURGH	CONNELLEY SKILL LEARNING CENTER	2	YES
1747	MEADVILLE	CRAWFORD COUNTY AREA VOC-TECH SCH	2	YES
1748	MECHANICSBURG	CUMBERLAND-PERRY AREA VOCATIONAL-TECHNI	2	YES
1749	MECHANICSBURG	CUMBERLAND-PERRY AREA VOCATIONAL-TECHNIC	2	NO
1750	MEDIA	DELAWARE CO CMTY COLLEGE	1	NO
1751	PHILADELPHIA	DOBBINS A V T S	2	NO
1752	WILLOW GROVE	EASTERN MONTGOMERY CTY A V T S	2	YES
1753	LATROBE	EASTERN WESTMORELAND CTY A V T S	2	NO
1754	EDINBORO	EDINBORO UNIV OF PA	3	YES
1755	ERIE	ERIE CO AREA VOC-TECH SCH REG OCC SKILL	2	NO
1756	UNIONTOWN	FAYETTE COUNTY AREA VOCATIONAL-TECHNICAL	2	NO
1757	LANCASTER	FRANKLIN AND MARSHALL C	3	NO
1758	ERIE	GANNON UNIVERSITY	3	YES
1759	BEAVER FALLS	GENEVA COLLEGE	3	NO
1760	JOHNSTOWN	GREATER JOHNSTOWN AREA VOC-TECH SCHOOL	2	NO
1761	WAYNESBURG	GREENE CTY A V T S	2	NO
1762	GWYNEDD VLY	GWYNEDD-MERCY COLLEGE	3	YES
1763	PHILADELPHIA	HAHNEMANN UNIV	3	NO
1764	BRYN MAWR	HARCUM JUNIOR COLLEGE	1	NO
1765	HARRISBURG	HARRISBURG AREA CC	1	NO
1766	HAZLETON	HAZLETON A V T S	2	NO
1767	JOHNSTOWN	HIRAM G ANDREWS CENTER	2	YES
1768	INDIANA	INDIANA U OF PENNSYLVANIA	3	NO
1769	KITTANNING	INDIANA UNIVERSITY OF PENNSYLVANIA	3	NO
1770	PHILADELPHIA	J F KENNEDY AREA VOCATIONAL-TECHNICAL S	2	YES
1771	PHILADELPHIA	J F KENNEDY AREA VOCATIONAL-TECHNICAL SC	2	NO
1772	REYNOLDSVILLE	JEFF TECH	2	YES
1773	SCRANTON	JOHNSON SCH OF TECH	2	NO
1774	LEWISTOWN	JUNIATA-MIFFLIN COUNTIES AREA VOC TECH S	2	NO
1775	LA PLUME	KEYSTONE JUNIOR COLLEGE	1	YES
1776	WILKES-BARRE	KING'S COLLEGE	3	NO
1777	SCRANTON	LACKAWANNA CNTY AREA VOC TECH SCH	2	YES

---------------------------------- STATE=PA --

OBS	CITY	NAME	INSTITUTION TYPE	INS
1778	SCRANTON	LACKAWANNA JUNIOR COLLEGE	1	NO
1779	WILLOW STREET	LANCASTER CTY A V T S	2	NO
1780	MOUNT JOY	LANCASTER CTY-MT JOY A V T S	2	NO
1781	NEW CASTLE	LAWRENCE COUNTY AREA VOC-TECH SCHOOL	2	NO
1782	LEBANON	LEBANON CTY A V T S	2	NO
1783	SCHNECKSVILLE	LEHIGH CO CMTY COLLEGE	1	NO
1784	NANTICOKE	LUZERNE CO CMTY COLLEGE	1	YES
1785	JENKINTOWN	MANOR JUNIOR COLLEGE	1	NO
1786	MANSFIELD	MANSFIELD UNIV OF PA	3	YES
1787	MCKEESPORT	MCKEESPORT A V T S	2	NO
1788	ERIE	MERCYHURST COLLEGE	3	NO
1789	GRANTHAM	MESSIAH COLLEGE	3	NO
1790	DALLAS	MISERICORDIA,COLLEGE	3	NO
1791	BARTONSVILLE	MONROE CTY A V T S	2	NO
1792	BLUE BELL	MONTGOMERY CO COMMUNITY C	1	NO
1793	CRESSON	MOUNT ALOYSIUS JR COLLEGE	1	YES
1794	BETHLEHEM	NORTHAMPTON CO AREA CC	1	YES
1795	PHILADELPHIA	ORLEANS TECHNICAL INSTITUTE	2	YES
1796	UPPER DARBY	PA INST OF TECHNOL	2	NO
1797	MEDIA	PA INSTITUTE TECHNOLOGY	2	YES
1798	ERIE	PA ST U BEHREND COLLEGE	3	NO
1799	HERSHEY	PA ST U MILT HERS MED CTR	3	YES
1800	NEW KENSINGTN	PA ST U NEW KENSINGTN CAM	3	NO
1801	SHARON	PA ST U SHENANGO VLY CAM	3	YES
1802	LEHMAN	PA ST U WILKES-BARRE CAM	3	NO
1803	DUNMORE	PA ST U WRTHGTN SCRTN CAM	3	YES
1804	ALTOONA	PA STATE U ALTOONA CAM	3	NO
1805	MONACA	PA STATE U BEAVER CAMPUS	3	NO
1806	READING	PA STATE U BERKS CAMPUS	3	NO
1807	MEDIA	PA STATE U DELAWARE CAM	3	NO
1808	DU BOIS	PA STATE U DU BOIS CAMPUS	3	YES
1809	UNIONTOWN	PA STATE U FAYETTE CAMPUS	3	YES
1810	HAZLETON	PA STATE U HAZLETON CAM	3	YES
1811	UNIVERSITY PK	PA STATE U MAIN CAMPUS	3	NO
1812	MCKEESPORT	PA STATE U MCKEESPORT CAM	3	YES
1813	MONT ALTO	PA STATE U MONT ALTO CAM	3	NO
1814	ABINGTON	PA STATE U OGONTZ CAMPUS	3	NO
1815	SHYLKL HAVEN	PA STATE U SCHUYLKILL CAM	3	YES
1816	YORK	PA STATE U YORK CAMPUS	3	NO
1817	PHILADELPHIA	PEIRCE JUNIOR COLLEGE	1	NO
1818	BRISTOL	PENNCO TECH INST	2	YES
1819	PHILADELPHIA	PENNSYLVANIA, UNIV OF	3	NO
1820	PHILADELPHIA	PHILADELPHIA WIRELESS TECHNICAL INSTITUT	2	NO
1821	PHILADELPHIA	PHILADELPHIA, CC OF	1	YES
1822	COOPERSBURG	PINEBROOK JUNIOR COLLEGE	1	YES
1823	BRADFORD	PITTSBG BRADFORD CAM,U OF	3	YES
1824	PITTSBURGH	PITTSBG MAIN CAMPUS,U OF	3	NO
1825	TITUSVILLE	PITTSBG TITUSVL CAM,U OF	1	YES
1826	PITTSBURGH	POINT PARK COLLEGE	3	NO
1827	READING	READING AREA CMTY COLLEGE	1	NO
1828	CORAOPOLIS	ROBERT MORRIS COLLEGE	3	YES
1829	CORAOPOLIS	ROBERT MORRIS COLLEGE	3	NO

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-------------------------------- STATE=PA ------------------------------------

OBS   CITY            NAME                                          INSTITUTION   INS
                                                                    TYPE

1830  WEXFORD         RPSC SCHOOL, THE                                   2         YES
1831  LORETTO         SAINT FRANCIS COLLEGE                              3         NO
1832  MAR LIN         SCHUYKILL COUNTY AREA VOCATIONAL TECHNI            2         YES
1833  MAR LIN         SCHUYKILL COUNTY AREA VOCATIONAL TECHNIC           2         NO
1834  FRACKVILLE      SCHUYLKILL TECHNICAL INSTITUTE                     2         NO
1835  SCRANTON        SCRANTON,UNIVERSITY OF                             3         NO
1836  PORT ALLEGANY   SENECA HIGHLANDS A V T S                           2         YES
1837  SOMERSET        SOMERSET COUNTY AREA VOC-TECH SCHOOL               2         NO
1838  CHESTNUT HILL   SPRING GARDEN COLLEGE                              3         YES
1839  LANCASTER       T STEVENS ST SCH OF TECH                           2         NO
1840  PHILADELPHIA    TEMPLE UNIVERSITY                                  3         NO
1841  GREENVILLE      THIEL COLLEGE                                      3         NO
1842  PHILADELPHIA    THOMAS JEFF UNIVERSITY                             3         NO
1843  PERKASIE        UPPER BUCKS CTY A V T S                            2         NO
1844  WAYNE           VALLEY FORGE MILITARY JC                           1         NO
1845  OIL CITY        VENANGO CTY A V T S                                2         NO
1846  ERIE            VILLA MARIA COLLEGE                                3         NO
1847  VILLANOVA       VILLANOVA UNIVERSITY                               3         NO
1848  WARREN          WARREN CTY A V T S                                 2         YES
1849  WAYNESBURG      WAYNESBURG COLLEGE                                 3         NO
1850  KINGSTON        WEST SIDE A V T S                                  2         NO
1851  YOUNGWOOD       WESTMORELAND COUNTY CC                             1         NO
1852  CHESTER         WIDENER COLL OF WIDENER U                          3         NO
1853  WILKES BARRE    WILKES-BARRE A V T S                               2         NO
1854  MEDIA           WILLIAMSON FREE SCH                                2         NO
1855  WILLIAMSPORT    WILLIAMSPORT AREA CC                               1         NO
1856  CHAMBERSBURG    WILSON COLLEGE                                     3         YES
1857  YORK            YORK COLLEGE PENNSYLVANIA                          3         NO
1858  YORK            YORK CTY A V T S                                   2         NO

1859     MONROEVILLE     FORBES RD EAST A V T S           2          NO
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OBS       CITY         NAME                                        INSTITUTION   INS
                                                                   TYPE

1860   SMITHFIELD    BRYANT C BUSINESS ADMIN                            3        NO
1861   LINCOLN       COMMUNITY COLLEGE OF RHODE ISLAND                  1        NO
1862   PROVIDENCE    JOHNSON & WALES COLLEGE                            3        NO
1863   WARWICK       NEW ENGLAND INST TECH/JULIAN B. GOUSE CA           3        NO
1864   PROVIDENCE    PROVIDENCE COLLEGE                                 3        NO
1865   WARWICK       RHODE ISLAND, CC OF                                1        NO
1866   KINGSTON      RHODE ISLAND, UNIV OF                              3        NO
1867   BRISTOL       ROGER WILLIAMS C MAIN CAM                          3        NO
1868   PROVIDENCE    ROGER WILLIAMS C PROV BR                           3        YES
1869   NEWPORT       SALVE REGINA COLLEGE                               3        NO
1870   NEWPORT       SALVE REGINA THE NEWPORT COLL                      3        YES

-------------------------------- STATE=SC ----------------------------------------

OBS    CITY            NAME                                        INSTITUTION  INS
                                                                   TYPE

1871   AIKEN           AIKEN TECHNICAL COLLEGE                          1       NO
1872   ANDERSON        ANDERSON COLLEGE                                 1       YES
1873   BEAUFORT        BEAUFORT TECH COLLEGE                            1       NO
1874   MONCKS CORNER   BERKLEY-TRIDENT TECHNICAL COLLEGE                1       NO
1875   GREENVILLE      BOB JONES UNIVERSITY                             3       NO
1876   CHESTER         CHESTER AREA VOCATIONAL CENTER                   2       NO
1877   CHERAW          CHESTERFLD-MARLBORO TECH                         1       NO
1878   ROCK HILL       CLINTON JUNIOR COLLEGE                           1       YES
1879   DENMARK         DENMARK TECHNICAL COLLEGE                        1       YES
1880   FLORENCE        FLORENCE DARLINGTON TECH                         1       NO
1881   GREENVILLE      GREENVILLE TECH COLLEGE                          1       NO
1882   GREENWOOD       GREENWOOD COUNTY VOCATIONAL FACILITIES           2       NO
1883   HARTSVILLE      HARTSVILLE CAREER CENTER                         2       NO
1884   GEORGETOWN      HORRY - GEORGETOWN TECHNICAL COLLEGE             1       NO
1885   CONWAY          HORRY-GEORGETOWN TECH C                          1       NO
1886   CAMDEN          KERSHAW COUNTY VOCATIONAL CENTER                 2       NO
1887   GREENWOOD       LANDER COLLEGE                                   3       NO
1888   BENNETTSVILLE   MARLBORO COUNTY AREA VOCATIONAL CENTER           2       NO
1889   COLUMBIA        MIDLANDS TECH COLLEGE                            1       NO
1890   TIGERVILLE      NORTH GREENVILLE COLLEGE                         1       YES
1891   ORANGEBURG      ORANGEBURG CALHOUN TECH C                        1       NO
1892   GREENWOOD       PIEDMONT TECH COLLEGE                            1       YES
1893   MOORE           R D ANDERSON AREA VOC CENTER                     2       NO
1894   AIKEN           SC AT AIKEN,U OF                                 3       YES
1895   COLUMBIA        SC AT COLUMBIA, UNIV OF                          3       NO
1896   LANCASTER       SC AT LANCASTER,UNIV OF                          1       NO
1897   UNION           SC AT UNION,UNIV OF                              1       NO
1898   CONWAY          SC COASTAL CAROLINA, U OF                        3       NO
1899   SPARTANBURG     SC-SPARTANBRG,UNIV OF                            3       NO
1900   SPARTANBURG     SPARTANBURG METH COLLEGE                         3       YES
1901   SPARTANBURG     SPARTANBURG TECH COLLEGE                         1       NO
1902   SUMTER          SUMTER AREA TECH COLLEGE                         1       NO
1903   SUMTER          SUMTER COUNTY CAREER CENTER                      2       NO
1904   PENDLETON       TRI-COUNTY TECH COLLEGE                          1       NO
1905   CHARLESTON      TRIDENT TECHNICAL COLLEGE                        1       YES
1906   KINGSTREE       WILLIAMSBURG TECH COLLEGE                        1       NO
1907   ROCK HILL       WINTHROP COLLEGE                                 3       NO
1908   ROCK HILL       YORK TECHNICAL COLLEGE                           1       YES
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OBS    CITY          NAME                                          INSTITUTION   INS
                                                                   TYPE

1909   MCLAUGHLIN    BISMARK JR COLLEGE STANDING ROCK COM COL           2        NO
1910   SPEARFISH     BLACK HILLS STATE COLLEGE                          3        YES
1911   SIOUX FALLS   CC NORTH CENTRAL U CEN                             2        NO
1912   EAGLE BUTTE   CHEYENNE RIVER COMMUNITY COLLEGE                   2        YES
1913   MADISON       DAKOTA STATE COLLEGE                               3        NO
1914   MITCHELL      DAKOTA WESLEYAN UNIV                               3        NO
1915   FREEMAN       FREEMAN JUNIOR COLLEGE                             1        NO
1916   HURON         HURON COLLEGE                                      3        NO
1917   WATERTOWN     LAKE AREA VOC-TECH INSTITUTE                       2        NO
1918   MITCHELL      MITCHELL AREA VOCATIONAL-TECHNICAL SCHOO           2        NO
1919   YANKTON       MOUNT MARTY COLLEGE                                3        NO
1920   ABERDEEN      NORTHERN STATE COLLEGE                             3        NO
1921   KYLE          OGLALA LAKOTA COLLEGE                              2        NO
1922   PINE RIDGE    OGLALA SIOUX CC                                    2        NO
1923   ABERDEEN      PRESENTATION COLLEGE                               1        NO
1924   SPRINGFIELD   SD AT SPRINGFIELD,U OF                             3        NO
1925   BROOKINGS     SD STATE UNIVERSITY                                3        NO
1926   ROSEBUD       SINTE GLESKA COLLEGE                               3        YES
1927   SIOUX FALLS   SIOUX FALLS COLLEGE                                3        NO
1928   VERMILLION    SOUTH DAKOTA,U OF                                  3        NO
1929   SIOUX CITY    SOUTHEAST AREA V-T                                 2        YES
1930   SIOUX FALLS   SOUTHEAST VO-TECH INSTITUTE                        2        NO
1931   RAPID CITY    WESTERN DAKOTA VO TECH INST                        2        YES
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OBS   CITY           NAME                                              INSTITUTION   INS
                                                                       TYPE

1932  ATHENS         ATHENS STATE AREA VOCATIONAL-TECHNICAL                 2         YES
1933  ATHENS         ATHENS STATE AREA VOCATIONAL-TECHNICAL S               2         NO
1934  CLARKSVILLE    AUSTIN PEAY ST UNIVERSITY                              3         NO
1935  NASHVILLE      BELMONT COLLEGE                                        3         YES
1936  BRISTOL        BRISTOL TN CTY SCH SYM ADULT VOC EDUCATI               2         NO
1937  CHATTANOOGA    CHATTANOOGA ST TECH CC                                 1         NO
1938  DICKSON        CLEMENT STATE AREA VOCATIONAL TECHNICAL                2         NO
1939  CLEVELAND      CLEVELAND ST CMTY COLLEGE                              1         NO
1940  COLUMBIA       COLUMBIA ST CMTY COLLEGE                               1         NO
1941  LOOKOUT MTN    COVENANT COLLEGE                                       1         YES
1942  COVINGTON      COVINGTON STATE AREA VOC-TECH SCHOOL                   2         NO
1943  DICKSON        DICKSON STATE AREA VOCATIONAL-TECHNICAL                2         YES
1944  DYERSBURG      DYERSBURG ST CMTY COLLEGE                              2         NO
1945  JOHNSON CITY   EAST TENN ST UNIVERSITY                                3         NO
1946  ELIZABETHTON   ELIZABETHTON STATE AREA VOC-TECH SCHOOL                2         YES
1947  GREENEVILLE    GREENEVILLE-GREENE COUNTY VOCATIONAL SC                2         NO
1948  GREENEVILLE    GREENEVILLE-GREENE COUNTY VOCATIONAL SCH               2         NO
1949  HARTSVILLE     HARTSVILLE STATE AREA VOCATIONAL-TECHNIC               2         NO
1950  HOHENWALD      HOHENWALD STATE AREA VOCATIONAL-TECHNICA               2         NO
1951  JACKSBORO      JACKSBORO STATE AREA VOCATIONAL-TECHNICA               2         NO
1952  JACKSON        JACKSON ST CMTY COLLEGE                                1         YES
1953  HARROGATE      LINCOLN MEM UNIV                                       3         NO
1954  LIVINGSTON     LIVINGSTON STATE AREA VOCATIONAL-TECHNI                2         YES
1955  LIVINGSTON     LIVINGSTON STATE AREA VOCATIONAL-TECHNIC               2         NO
1956  CHATTANOOGA    MCKENZIE COLLEGE                                       1         YES
1957  JACKSON        MECKLER FIELD STATE AREA VOC TECH SCH                  2         NO
1958  MEMPHIS        MEMPHIS STATE AREA VOCATIONAL-TECHNICAL                2         NO
1959  MEMPHIS        MEMPHIS STATE UNIVERSITY                               3         NO
1960  MURFREESBORO   MIDDLE TENN ST UNIVERSITY                              3         NO
1961  MILLIGAN CLG   MILLIGAN COLLEGE                                       3         YES
1962  MORRISTOWN     MORRISTOWN AREA VOCATIONAL-TECHNICAL SCH               2         NO
1963  TULLAHOMA      MOTLOW STATE CMTY COLLEGE                              1         NO
1964  NASHVILLE      NASHVILLE STATE A V T S                                2         NO
1965  NASHVILLE      NASHVILLE STATE TECH INST                              1         YES
1966  NEWBERN        NEWBERN STATE AREA VOCATIONAL-TECHNICAL                2         YES
1967  PARIS          PARIS STATE AREA VOCATIONAL-TECHNICAL SC               2         NO
1968  PULASKI        PULASKI STATE AREA VOCATIONAL-TECHNICAL                2         YES
1969  RIPLEY         RIPLEY AREA VOCATIONAL-TECHNICAL SCHOOL                2         NO
1970  HARRIMAN       ROANE STATE CMTY COLLEGE                               1         NO
1971  CRUMP          SAVANNAH AREA VOCATIONAL TECHNICAL SCHOO               2         NO
1972  MEMPHIS        SEA ISLE VOCATIONAL TECHNICAL CENTER                   2         NO
1973  MEMPHIS        SHELBY STATE CMTY COLLEGE                              1         NO
1974  SHELBYVILLE    SHELBYVILLE STATE AREA VOC-TECH SCHOOL                 2         NO
1975  ONEIDA         STATE AREA VO-TECH SCHOOL                              2         NO
1976  ROGERSVILLE    STATE AREA VOC TECH SCHOOL BRANCH                      2         NO
1977  CROSSVILLE     STATE AREA VOC-TECH SCHOOL                             2         NO
1978  ATHENS         STATE AREA VOCATIONAL TECHNICAL SCHOOL                 2         NO
1979  ATHENS         STATE AREA VOCATIONAL TECHNICAL SCHOOL                 2         NO
1980  MC KENZIE      STATE AREA VOCATIONAL TECHNICAL SCHOOL                 2         NO
1981  JACKSON        STATE AREA VOCATIONAL TECHNICAL SCHOOL                 2         NO
1982  HARRIMAN       STATE AREA VOCATIONAL-TECHNICAL SCH-HAR                2         NO
1983  HARRIMAN       STATE AREA VOCATIONAL-TECHNICAL SCH-HARR               2         NO
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OBS	CITY	NAME	INSTITUTION TYPE	INS
1984	WHITEVILLE	STATE AREA VOCATIONAL-TECHNICAL SCHOOL	2	YES
1985	WHITEVILLE	STATE AREA VOCATIONAL-TECHNICAL SCHOOL	2	NO
1986	MC KENZIE	STATE AREA VOCATIONAL-TECHNICAL SCHOOL	2	NO
1987	KNOXVILLE	STATE TECH INST KNOXVILLE	2	NO
1988	MEMPHIS	STATE TECH INST MEMPHIS	2	YES
1989	COLLEGEDALE	STHRN COLL OF 7TH DAY ADVENTIST	3	YES
1990	CHATTANOOGA	TENN-CHATTANOOGA, UNIV OF	3	NO
1991	KNOXVILLE	TENN-KNOXVILLE, UNIV OF	3	NO
1992	MARTIN	TENN-MARTIN, UNIV OF	3	NO
1993	NASHVILLE	TENNESSEE ST UNIVERSITY	3	NO
1994	COOKEVILLE	TENNESSEE TECHNOLOGICAL U	3	NO
1995	CLEVELAND	TOMLINSON COLLEGE	1	NO
1996	NASHVILLE	TREVECCA NAZARENE COLLEGE	3	YES
1997	BLOUNTVILLE	TRI-CITIES ST TECH INST	2	YES
1998	JACKSON	UNION UNIVERSITY	3	YES
1999	GALLATIN	VOLUNTEER ST CMTY COLLEGE	1	YES
2000	MORRISTOWN	WALTERS ST CMTY COLLEGE	1	YES
2001	MEMPHIS	WILLIAM MOORE SCHOOL OF TECHNOLOGY	2	NO

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OBS      CITY                NAME                             INSTITUTION     INS
                                                              TYPE

2002     ABILENE             ABILENE CHRSTN UNIVERSITY             3          NO
2003     FORT WORTH          ADULT EDUCATION CENTER                2          NO
2004     ALVIN               ALVIN COMMUNITY COLLEGE               1          NO
2005     AMARILLO            AMARILLO COLLEGE                      1          YES
2006     LUFKIN              ANGELINA COLLEGE                      1          NO
2007     SAN ANGELO          ANGELO STATE UNIVERSITY               3          NO
2008     AUSTIN              AUSTIN COMMUNITY COLLEGE              1          YES
2009     BEEVILLE            BEE COUNTY COLLEGE                    1          NO
2010     BRENHAM             BLINN COLLEGE                         1          NO
2011     LAKE JACKSON        BRAZOSPORT COLLEGE                    1          YES
2012     FARMERSBRANCH       BROOKHAVEN COLLEGE                    1          NO
2013     LANCASTER           CEDAR VALLEY COLLEGE                  1          YES
2014     KILLEEN             CENTRAL TEXAS COLLEGE                 1          NO
2015     CISCO               CISCO JUNIOR COLLEGE                  1          NO
2016     CLARENDON           CLARENDON COLLEGE                     1          YES
2017     GAINESVILLE         COOKE COUNTY COLLEGE                  1          NO
2018     CORPUS CHRSTI       DEL MAR COLLEGE                       1          YES
2019     MESQUITE            EASTFIELD COLLEGE                     1          YES
2020     DALLAS              EL CENTRO COLLEGE                     1          NO
2021     EL PASO             EL PASO CMTY COLLEGE                  1          NO
2022     BORGER              FRANK PHILLIPS COLLEGE                1          NO
2023     GALVESTON           GALVESTON COLLEGE                     1          YES
2024     DENISON             GRAYSON CO COLLEGE                    1          YES
2025     ATHENS              HENDERSON CO JR COLLEGE               1          NO
2026     HILLSBORO           HILL JUNIOR COLLEGE                   1          NO
2027     HOUSTON             HOUSTON COMMUNITY COLLEGE             1          NO
2028     HOUSTON             HOUSTON DOWNTOWN, UNIV OF             3          YES
2029     BIG SPRING          HOWARD CO JC DIST                     1          YES
2030     HAWKINS             JARVIS CHRISTIAN COLLEGE              3          NO
2031     KILGORE             KILGORE COLLEGE                       1          NO
2032     BEAUMONT            LAMAR UNIVERSITY                      3          NO
2033     LAREDO              LAREDO JUNIOR COLLEGE                 1          YES
2034     RIO GRANDE CITY     LAREDO JUNIOR COLLEGE                 1          NO
2035     BAYTOWN             LEE COLLEGE                           1          YES
2036     LONGVIEW            LETOURNEAU COLLEGE                    3          NO
2037     LUBBOCK             LUBBOCK CHRISTIAN COLLEGE             3          YES
2038     TEXAS CITY          MAINLAND,COLLEGE OF THE               1          NO
2039     WACO                MCLENNAN CMTY COLLEGE                 1          NO
2040     MIDLAND             MIDLAND COLLEGE                       1          NO
2041     WICHITA FALLS       MIDWESTERN ST UNIVERSITY              3          NO
2042     DALLAS              MOUNTAIN VIEW COLLEGE                 1          NO
2043     KINGWOOD            N HARRIS CO COLL-EAST CAMPUS          1          NO
2044     CORSICANA           NAVARRO COLLEGE                       1          NO
2045     HOUSTON             NORTH HARRIS CO COLLEGE DIST          1          NO
2046     IRVING              NORTH LAKE COLLEGE                    1          NO
2047     ODESSA              ODESSA COLLEGE                        1          NO
2048     EDINBURG            PAN AMERICAN UNIVERSITY               3          NO
2049     CARTHAGE            PANOLA JUNIOR COLLEGE                 1          YES
2050     PARIS               PARIS JUNIOR COLLEGE                  1          NO
2051     RANGER              RANGER JUNIOR COLLEGE                 1          NO
2052     DALLAS              RICHLAND COLLEGE                      1          NO
2053     SAN ANTONIO         SAINT PHILIP'S COLLEGE                1          YES
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OBS    CITY              NAME                                          INSTITUTION   INS
                                                                       TYPE

2054   SAN ANTONIO       SAN ANTONIO COLLEGE                                1        YES
2055   PASADENA          SAN JACINTO C CENTRAL CAM                          1        YES
2056   HOUSTON           SAN JACINTO C NORTH CAM                            1        NO
2057   HOUSTON           SAN JACINTO COLLEGE SOUTH CAMPUS                   1        NO
2058   KERRVILLE         SCHREINER COLLEGE                                  1        NO
2059   LEVELLAND         SOUTH PLAINS COLLEGE                               1        NO
2060   LUBBOCK           SOUTH PLAINS COLLEGE-LUBBOCK                       1        NO
2061   UVALDE            SOUTHWEST TEX JR COLLEGE                           1        NO
2062   SAN MARCOS        STHWST TEXAS ST UNIV                               3        NO
2063   KEENE             STHWSTN ADVENTIST COLLEGE                          3        YES
2064   ALPINE            SUL ROSS STATE UNIVERSITY                          3        YES
2065   UVALDE            SW TEXAS J COLL                                    1        YES
2066   STEPHENVILLE      TARLETON STATE UNIVERSITY                          3        YES
2067   HURST             TARRANT CO JC-NORTHEAST CAMPUS                     1        NO
2068   FORT WORTH        TARRANT CO JC-NORTHWEST CAMPUS                     1        NO
2069   FORT WORTH        TARRANT CO JC-SOUTH CAMPUS                         1        NO
2070   FORT WORTH        TARRANT CO JUNIOR COLLEGE DIST                     1        NO
2071   ROSEBUD           TEMPLE JR COLLEGE ROSEBUD CAMPUS                   1        NO
2072   TEMPLE            TEMPLE JUNIOR COLLEGE                              1        NO
2073   SAN ANTONIO       TEX HLTH SCI SN AN, U OF                           3        NO
2074   AMARILLO          TEX ST TECH AMARILLO CAM                           1        YES
2075   WACO              TEX ST TECH INST WACO CAM                          1        YES
2076   TEXARKANA         TEXARKANA COLLEGE                                  1        YES
2077   BROWNSVILLE       TEXAS SOUTHMOST COLLEGE                            1        NO
2078   SAN ANTONIO       TX A AND M UNIV SYSTEM TX ENGR EXT SERVI           2        NO
2079   HOUSTON           TX HLTH SCI CTR-HOUSTN,U                           3        NO
2080   HARLINGEN         TX ST TECH RIO GRND C HAR                          1        YES
2081   SWEETWATER        TX ST TECH-SWEETWATER CAM                          2        YES
2082   TYLER             TYLER JUNIOR COLLEGE                               1        NO
2083   WICHITA FALLS     VERNON REG JR COLLEGE  DEPT OF VOCATIONA           1        NO
2084   VERNON            VERNON REG JUNIOR COLLEGE                          1        NO
2085   VICTORIA          VICTORIA COLLEGE                                   1        NO
2086   WEATHERFORD       WEATHERFORD COLLEGE                                1        YES
2087   SNYDER            WESTERN TEXAS COLLEGE                              1        NO
2088   WHARTON           WHARTON CO JR COLLEGE                              1        NO
2089   RICHMOND          WHARTON COUNTY  JUNIOR COLLEGE                     1        NO
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---------------------------------- STATE=UT ----------------------------------

OBS   CITY             NAME                                         INSTITUTION  INS
                                                                    TYPE

2090  LOGAN            BRIDGERLAND AREA VOCATIONAL CENTER                2        NO
2091  PROVO            BRIGHAM YOUNG U CEN OFF                           3        NO
2092  PROVO            BRIGHAM YOUNG U MAIN CAM                          3        YES
2093  PROVO            BYU                                               3        NO
2094  PRICE            COLLEGE OF EASTERN UTAH                           1        YES
2095  BLANDING         COLLEGE OF EASTERN UTAH SAN JUAN CAMPUS           1        NO
2096  KAYSVILLE        DAVIS VOCATIONAL CENTER                           2        YES
2097  SAINT GEORGE     DIXIE COLLEGE                                     1        NO
2098  SALT LAKE CY     LATTER-DAY SAINTS BUS C                           1        NO
2099  OGDEN            ODGEN-WEBER AREA VOCATIONAL CENTER                2        NO
2100  SALT LAKE CITY   SALT LAKE SKILLS CENTER                           2        NO
2101  RICHFIELD        SEVIER VALLEY TECHNICAL CENTER                    2        YES
2102  EPHRAIM          SNOW COLLEGE                                      1        NO
2103  CEDAR CITY       SOUTHERN UTAH ST COLLEGE                          3        NO
2104  ROOSEVELT        UINTAH BASIN AREA VOCATIONAL CENTER               2        NO
2105  ROOSEVELT        UTAH STATE UNIV UINTAH BASIN EDUCATION C          3        NO
2106  LOGAN            UTAH STATE UNIVERSITY                             3        YES
2107  PROVO            UTAH TECH COLLEGE PROVO                           1        NO
2108  SALT LAKE CY     UTAH TECH COLLEGE SALT LK                         1        YES
2109  OGDEN            WEBER STATE COLLEGE                               3        NO


---------------------------------- STATE=VA ----------------------------------

OBS   CITY             NAME                                         INSTITUTION  INS
                                                                    TYPE

2110  SALEM            ARNOLD R BURTON V T S                             2        NO
2111  DANVILLE         AVERETT COLLEGE                                   3        NO
2112  WEYERS CAVE      BLUE RIDGE CMTY COLLEGE                           1        NO
2113  BLUEFIELD        BLUEFIELD COLLEGE                                 3        YES
2114  FINCASTLE        BOTETOURT CTY V S                                 2        NO
2115  SOUTH HILL       BRUNSWICK-LUNENBURG-MECKLENBURG SCH PRA           2        NO
2116  SOUTH HILL       BRUNSWICK-LUNENBURG-MECKLENBURG SCH PRAC          2        NO
2117  GRUNDY           BUCHANON CTY V S                                  2        NO
2118  LYNCHBURG        CENTRAL VA CMTY COLLEGE                           1        NO
2119  LEESBURG         CHAS MONROE V-T CTR                               2        NO
2120  CHESTERFIELD     CHESTERFIELD TECH SCH                             2        NO
2121  CLIFTON FORGE    DABNEY S LANCASTER CC                             1        YES
2122  DANVILLE         DANVILLE CMTY COLLEGE                             1        YES
2123  CLINCHCO         DICKENSON COUNTY VOCATIONAL SCHOOL                2        NO
2124  WINCHESTER       DOWELL J HOWARD VOC SCH                           2        NO
2125  HARRISONBURG     ESTN MENNONITE C                                  3        YES
2126  MELFA            ESTN SHORE CMTY COLLEGE                           1        NO
2127  WARRENTON        FAUQUIER TECH CTR                                 2        NO
2128  LOCUST GROVE     GERMANNA CMTY COLLEGE                             1        NO
2129  PEARISBURG       GILES CTY VOC SCH                                 2        NO
2130  RICHMOND         J SARGEANT REYNOLDS CC                            1        NO
2131  CHESTER          JOHN TYLER CMTY COLLEGE                           1        NO
2132  NORFOLK          JOHNSON & WALES COLLEGE                           1        NO
2133  MIDDLETOWN       LORD FAIRFAX CMTY COLLEGE                         1        NO
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-------------------------------- STATE=VA ---------------------------------

 OBS      CITY            NAME                                   INSTITUTION   INS
                                                                 TYPE

 2134  ARLINGTON        MARYMOUNT COLLEGE OF VA                        3       NO
 2135  HARRISONBURG     MASSANUTTEN V-T CTR                            2       NO
 2136  BIG STONE GAP    MTN EMPIRE CMTY COLLEGE                        1       YES
 2137  DUBLIN           NEW RIVER CMTY COLLEGE                         1       NO
 2138  NORFOLK          NORFOLK STATE UNIVERSITY                       1       NO
 2139  NORFOLK          NORFOLK TECH VOC CTR                           3       NO
 2140  ANNANDALE        NORTHERN VA CMTY COLLEGE                       2       NO
 2141  MARTINSVILLE     PATRICK HENRY CC                               1       NO
 2142  FRANKLIN         PAUL D CAMP CMTY COLLEGE                       1       NO
 2143  CHARLOTTESVL     PIEDMONT VA CMTY COLLEGE                       1       YES
 2144  GLENNS           RAPPAHANNOCK CMTY COLLEGE                      1       NO
 2145  WARSAW           RAPPAHANNOCK COMMUNITY COLLEGE M D T A         1       YES
 2146  RICHMOND         RICHMOND TECH CTR                              2       NO
 2147  LEBANON          RUSSELL CTY V-T S                              2       NO
 2148  WINCHESTER       SHENANDOAH C-CONSV MUSIC                       3       NO
 2149  BUENA VISTA      SOUTHERN SEM JR COLLEGE                        1       NO
 2150  ALBERTA          SOUTHSIDE VA CMTY COLLEGE                      1       NO
 2151  KEYSVILLE        SOUTHSIDE VA COMM COLLEGE JOHN H DANIEL        1       NO
 2152  RICHLANDS        SOUTHWEST VA CMTY COLLEGE                      1       NO
 2153  TAZEWELL         TAZEWELL CTY VOC SCH                           2       NO
 2154  HAMPTON          THOMAS NELSON CMTY COL                         1       NO
 2155  PORTSMOUTH       TIDEWATER CMTY COLLEGE                         1       YES
 2156  CHESAPEAKE       TIDEWATER COMM COLLEGE CHESAPEAKE CAMPU        1       YES
 2157  CHESAPEAKE       TIDEWATER COMM COLLEGE CHESAPEAKE CAMPUS       1       NO
 2158  VIRGINIA BEACH   TIDEWATER COMMUNITY COLL VA BEACH CAMPUS       1       NO
 2159  VA BEACH         VA BEACH V-T EDUC CTR                          2       NO
 2160  ABINGDON         VA HIGHLANDS CMTY COLLEGE                      1       YES
 2161  ROANOKE          VA WESTERN CMTY COLLEGE                        1       NO
 2162  FISHERSVILLE     VALLEY VO-TECH CENTER                          2       NO
 2163  RICHMOND         VIRGINIA COMMONWEALTH U                        3       NO
 2164  WISE             WISE CTY V-T SCH                               2       NO
 2165  FISHERVILLE      WOODROW WILSON REHAB CTR                       2       YES
 2166  WYTHEVILLE       WYTHEVILLE CMTY COLLEGE                        1       NO


-------------------------------- STATE=VT ---------------------------------

 OBS   CITY            NAME                                INSTITUTION   INS
                                                           TYPE

 2167  BURLINGTON      CHAMPLAIN COLLEGE                        1        YES
 2168  POULTNEY        GREEN MOUNTAIN COLLEGE                   3        YES
 2169  LYNDONVILLE     LYNDON STATE COLLEGE                     3        NO
 2170  BENNINGTON      SOUTHERN VERMONT COLLEGE                 3        NO
 2171  CRAFTSBRY CMN   STERLING COLLEGE                         1        NO
 2172  MONTPELIER      VERMONT COLLEGE                          3        NO
 2173  RANDOLPH CTR    VERMONT TECHNICAL COLLEGE                1        YES
 2174  WATERBURY       VERMONT, COM COL OF                      1        NO
 2175  BURLINGTON      VT & STATE AGRL COL, UNIV                3        NO
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------------------------------- STATE=WA ---------------------------------------

OBS   CITY            NAME                                      INSTITUTION  INS
                                                                TYPE

2176  TACOMA WA       BATES V-T INST                                 2        NO
2177  BELLEVUE        BELLEVUE CMTY COLLEGE                          1        NO
2178  BELLINGHAM      BELLINGHAM VOCATIONAL TECHNICAL INSTITUT       2        NO
2179  MOSES LAKE      BIG BEND CMTY COLLEGE                          1        YES
2180  CENTRALIA       CENTRALIA COLLEGE                              1        YES
2181  BELLEVUE        CITY UNIVERSITY                                3        NO
2182  VANCOUVER       CLARK COLLEGE                                  1        YES
2183  TACOMA          CLOVER PARK VOCATIONAL-TECHNICAL INSTIT        2        YES
2184  TACOMA          CLOVER PARK VOCATIONAL-TECHNICAL INSTITU       2        NO
2185  PASCO           COLUMBIA BASIN COL                             1        NO
2186  LYNNWOOD        EDMONDS COMMUNITY COLLEGE                      1        YES
2187  EVERETT         EVERETT CMTY COLLEGE                           1        NO
2188  TACOMA          FORT STEILACOOM CC                             1        YES
2189  ABERDEEN        GRAYS HARBOR COLLEGE                           1        YES
2190  AUBURN          GREEN RIVER CMTY COLLEGE                       1        NO
2191  MIDWAY          HIGHLINE CMTY COLLEGE                          1        NO
2192  KIRKLAND        LAKE WASHINGTON VOCATIONAL-TECHNICAL INS       2        NO
2193  LONGVIEW        LOWER COLUMBIA COLLEGE                         1        NO
2194  SEATTLE         NORTH SEATTLE CC                               1        NO
2195  BREMERTON       OLYMPIC COLLEGE                                1        YES
2196  PORT ANGELES    PENINSULA COLLEGE                              1        NO
2197  RENTON          RENTON VOCATIONAL-TECHNICAL INSTITUTE          1        NO
2198  SEATTLE         SEATTLE CC SOUTH CAMPUS                        1        YES
2199  SEATTLE         SEATTLE CENTRAL CC                             1        NO
2200  EDMONDS         SHORELINE COMMUNITY COLLEGE                    1        YES
2201  MOUNT VERNON    SKAGIT VALLEY COLLEGE                          1        NO
2202  OLYMPIA         SO PUGET SOUND CMTY C                          1        YES
2203  SPOKANE         SPOKANE COMMUNITY COLLEGE                      1        NO
2204  SPOKANE         SPOKANE FALLS CMTY COL                         1        NO
2205  TACOMA          TACOMA COMMUNITY COLLEGE                       1        NO
2206  WALLA WALLA     WALLA WALLA CMTY COLLEGE                       1        YES
2207  COLLEGE PLACE   WALLA WALLA COLLEGE                            3        YES
2208  WENATCHEE       WENATCHEE VALLEY COLLEGE                       1        NO
2209  BELLINGHAM      WHATCOM CMTY COLLEGE                           1        NO
2210  YAKIMA          YAKIMA VALLEY CC                               1        NO
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STATE=WI

BS	CITY	NAME	INSTITUTION TYPE	INS
211	MILWAUKEE	ALVERNO COLLEGE	3	NO
212	MADISON	AREA VTAE DISTRICT NUMBER FOUR	1	NO
2213	JANESVILLE	BLACKHAWK VTAE DISTRICT	1	YES
2214	MILWAUKEE	CARDINAL STRITCH COLLEGE	3	YES
215	MEQUON	CONCORDIA C WISCONSIN	3	NO
216	MADISON	EDGEWOOD COLLEGE	3	NO
2217	APPLETON	FOX VALLEY VTAE DIST	1	NO
218	RACINE	GATEWAY TECH INST	1	NO
219	KENOSHA	GATEWAY VTAE DIST	1	NO
2220	RICE LAKE	INDIANHEAD TECHNICAL INSTITUTE--RICE LAK	2	NO
2221	SUPERIOR	INDIANHEAD TECHNICAL INSTITUTE--SUPERIO	2	YES
222	SUPERIOR	INDIANHEAD TECHNICAL INSTITUTE--SUPERIOR	2	NO
223	CLEVELAND	LAKESHORE VTAE DIST	1	NO
2224	EAU CLAIRE	LUTHER HOSP SCHOOL OF RADIOLOGIC TECHNOL	1	NO
225	MADISON	MADISON AREA TECH COLLEGE	1	NO
226	MARSHFIELD	MID-STATE TECHNICAL INSTITUTE	2	NO
2227	STEVENS POINT	MID-STATE TECHNICAL INSTITUTE	2	NO
2228	WISC RAPIDS	MID-STATE VTAE DIST	1	YES
229	MILWAUKEE	MILWAUKEE AREA VTAE DIST	1	NO
230	MILWAUKEE	MILWAUKEE SCH ENGINEERING	3	NO
2231	BEAVER DAM	MORAINE PARK TECH INST BEAVER DAM CAMPUS	1	NO
232	WEST BEND	MORAINE PARK TECHNICAL INSTITUTE-WEST B	1	YES
233	WEST BEND	MORAINE PARK TECHNICAL INSTITUTE-WEST BE	1	NO
2234	FOND DU LAC	MORAINE PARK VTAE DIST	1	NO
2235	RHINELANDER	NICOLET VTAE DIST	1	YES
236	ANTIGO	NORTH CENTRAL TECHNICAL INSTITUTE	1	YES
237	WAUSAU	NORTH CENTRAL VTAE DIST	1	YES
2238	GREEN BAY	NORTHEAST WIS VTAE DIST	1	NO
239	STURGEON BAY	NORTHEAST WISCONSIN TECH INST STURGEON B	1	NO
240	MANITOWOC	SILVER LAKE COLLEGE	3	NO
2241	FENNIMORE	STHWST WIS VTAE DIST	1	NO
2242	EAU CLAIRE	VTAE DIST ONE	1	YES
243	PEWAUKEE	WAUKESHA COUNTY VTAE DIST	1	NO
244	LA CROSSE	WESTERN WIS VTAE DIST	1	NO
2245	SHELL LAKE	WIS INDIANHEAD VTAE DIST	1	NO
2246	NEW RICHMOND	WISCONSIN INDIANHEAD TECHNICAL INSTITUTE	2	NO
247	ASHLAND	WISCONSIN INDIANHEAD TECHNICAL INSTITUTE	2	NO

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------------------------------------ STATE=WV ------------------------------------------

OBS   CITY            NAME                                         INSTITUTION  INS
                                                                   TYPE

2248  LIVERPOOL       ARCH A MOORE V-T AND ADULT CTR                    2       YES
2249  BECKLEY         BECKLEY COLLEGE                                   1       NO
2250  DUNBAR          BENJAMIN FRANKLIN CAREER & TECH EDUCATIO          2       NO
2251  BLUEFIELD       BLUEFIELD STATE COLLEGE                           3       NO
2252  DANVILLE        BOONE COUNTY CAREER & TECHNICAL CENTER            2       NO
2253  HUNTINGTON      CABELL COUNTY VOCATIONAL TECHNICAL CENTE          2       NO
2254  GRANTSVILLE     CALHOUN-GILMER CAREER CTR                         2       YES
2255  CHARLESTON      CHARLESTON, UNIV OF                               3       YES
2256  ELKINS          DAVIS AND ELKINS COLLEGE                          3       NO
2257  FAIRMONT        FAIRMONT STATE COLLEGE                            3       YES
2258  OAK HILL        FAYETTE PLATEAU V-T CTR                           2       NO
2259  GLENVILLE       GLENVILLE STATE COLLEGE                           3       NO
2260  LEWISBURG       GREENBRIER COMMUNITY COLLEGE CENTER               3       NO
2261  NEW CUMBERLAND  HANCOCK CO VO-TECH CTR                            2       NO
2262  RIPLEY          JACKSON COUNTY SCHOOLS                            2       YES
2263  MARTINSBURG     JAMES RUMSEY VOCATIONAL TECHNICAL CENTER          2       NO
2264  HAMLIN          LINCOLN CTY V-T CTR                               2       NO
2265  FARMINGTON      MARION COUNTY VOCATIONAL-TECHNICAL CENTE          2       NO
2266  HUNTINGTON      MARSHALL UNIVERSITY                               3       YES
2267  WELCH           MCDOWELL COUNTY VOCATIONAL TECHNICAL CEN          2       NO
2268  PRINCETON       MERCER COUNTY VOCATIONAL-TECHNICAL CENT           2       NO
2269  PRINCETON       MERCER COUNTY VOCATIONAL-TECHNICAL CENTE          2       NO
2270  KEYSER          MINERAL CTY V-T CTR                               2       NO
2271  DELBARTON       MINGO VO-TECH. CENTER                             2       YES
2272  MORGANTOWN      MONONGALIA COUNTY VOCATIONAL CENTER               2       NO
2273  PARKERSBURG     OHIO VALLEY COLLEGE                               1       YES
2274  SAINT MARY      P R T V-T CTR                                     2       NO
2275  PARKERSBURG     PARKERSBURG CMTY COLLEGE                          1       NO
2276  KEYSER          POTOMAC ST C OF W VA U                            1       NO
2277  KINGWOOD        PRESTON CTY EDUC CTR                              2       NO
2278  ELEANOR         PUTNAM CTY V-T CTR                                2       NO
2279  BECKLEY         RALEIGH COUNTY VOCATIONAL-TECHNICAL CENT          2       NO
2280  CLARKSBURG      SALEM COLLEGE CLARKSBURG                          3       NO
2281  SALEM           SALEM COLLEGE MAIN CAMPUS                         3       NO
2282  SHEPHERDSTOWN   SHEPHERD COLLEGE                                  3       NO
2283  WILLIAMSON      SOUTHERN WV C C WILLIAMSON                        1       NO
2284  LOGAN           STHN W VA CC                                      1       YES
2285  INSTITUTE       W VA STATE COLLEGE                                3       NO
2286  WEST LIBERTY    WEST LIBERTY ST COLLEGE                           3       NO
2287  MONTGOMERY      WEST VA INST TECHNOLOGY                           3       NO
2288  BUCKHANNON      WEST VA WESLEYAN COLLEGE                          3       NO
2289  WHEELING        WEST VIRGINIA NORTHERN CC                         1       NO
2290  PINEVILLE       WYOMING CTY VO-TECH CENTER                        2       YES
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---------------------------------- STATE=WY ----------------------------------

OBS   CITY           NAME                                            INSTITUTION  INS
                                                                     TYPE

2291  CASPER         CASPER COLLEGE                                       1       YES
2292  RIVERTON       CENTRAL WYOMING COLLEGE                              1       NO
2293  TORRINGTON     EASTERN WYOMING COLLEGE                              1       NO
2294  CHEYENNE       LARAMIE CO CMTY COLLEGE                              1       YES
2295  GILLETTE       NORTHEAST WYOMING VOCATIONAL TECHNICAL               2       YES
2296  GILLETTE       NORTHEAST WYOMING VOCATIONAL TECHNICAL S             2       NO
2297  POWELL         NORTHWEST CMTY COLLEGE                               1       NO
2298  SHERIDAN       SHERIDAN COLLEGE                                     1       NO
2299  ROCK SPRINGS   WESTERN WYO CMTY COLLEGE                             1       NO
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APPENDIX C

MAIL SURVEY QUESTIONNAIRE

ADMINISTRATIVE OFFICIAL

Postsecondary Occupational Education Delivery: An Examination

Conducted by:

The National Center for Research
in Vocational Education
The Ohio State University

Sponsored by:

Office of Vocational and
Adult Education
U.S. Department of Education

Why we need your help....

Your institution has been selected in a national study of postsecondary occupational education. You have been selected as a representative of your institution to help with that study. Your answers to the questions that follow are very important. They will help provide a basis for describing accurately occupational education as it is offered in postsecondary institutions in this country and should also provide support for future program improvements.

How you can help....

On the pages that follow you will find a number of questions that relate specifically to your community and institution, the kinds of students that attend your institution, and internal and external influences on curriculum and instruction. These questions can be answered quickly by placing an "X" or a check mark "✓" in the "[ ]" next to your answer or by filling in the blank spaces provided. (See the examples shown in the box below.) Please answer all the questions as accurately as possible. Please use a pen to mark your responses.

EXAMPLE 1:

- **Nationally, about what percentage of high school students drop out each year?**
  - **[1] Between 4% and 8%**
  - **[2] Slightly less than 15%**
  - **☒ About 28%**
  - **[4] Over 50%**

EXAMPLE 2:

- **About what percentage of the students in your institution are:**
  - **(a) Females?** 53 **%**
  - **(b) Males?** 47 **%**

When you have completed your questionnaire, (a) fold it in half, (b) staple or tape it together and (c) return it to the institutional liaison whose name is listed below. Your participation in this study is voluntary. In addition, the information you provide will be treated in the strictest confidence; no data will be associated with the name of an individual or institution in any project-related reports or other form of information dissemination. All data will be aggregated across individuals and institutions and described only at the national level.

WOULD YOU LIKE A SUMMARY REPORT OF OUR STUDY? [ ] YES [ ] NO

INSTITUTIONAL LIAISON Name: ____________________
Address: ____________________

Name: ______________________________

Title: ______________________________

Institution: ______________________________

Governance Structure

1. What state agencies do you interact with for planning, coordination, program approval, budget requests for state funding, or other governance matters concerning occupational programs?

	Agency Name	None
a) Planning	______________________	[9]
b) Coordination	______________________	[9]
c) Program approval	______________________	[9]
d) Budget approval	______________________	[9]
e) Other matters:		
1. __________	______________________	
2. __________	______________________	

2. a) How many individuals are on your board of trustees or governing board? ____
   b) How many members are elected by the public? ____
   c) How many members are appointed by an elected official(s)? ____
   d) How many members would you characterize as business representatives? ____
   e) How many members would you characterize as labor organization representatives? ____

3. Is Board approval required for any of the following actions--

	Yes	No
a) Discontinuation of a course offering	[1]	[2]
b) Discontinuation of a program	[1]	[2]
c) Establishing a new course offering	[1]	[2]
d) Establishing a new program	[1]	[2]
e) Faculty/staff member services on a community board such as the Private Industry Council	[1]	[2]
f) Application for federal funds under the JTPA or Carl Perkins Act	[1]	[2]
g) Hiring a faculty member	[1]	[2]
h) Dismissing a faculty member	[1]	[2]

4. We are interested in the extent of involvement of various parties within your governance structure in administrative, academic, and financial matters. Using the "administrative involvement" scale below, indicate how active (i) the departments or programs in your institution, (ii) your administration, (iii) your board of trustees, and (iv) your state's governing or coordinating agency are in decision-making concerning--

"Administrative Involvement" Scale

No involvement	Little	Some	Moderate	High level of involvement
1	2	3	4	5

	(i) Dept. or programs	(ii) Administration	(iii) Bd. of Trustees	(iv) State agency
a) Searches for administrative staff	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
b) Institution's calendar	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
c) Promotion/retention of instructional staff	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
d) Institution mission	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
e) Budget process	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
f) Instructor evaluation	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
g) Administrator evaluation	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
h) Grading standards	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
i) Professional development activities	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
j) Facilities and equipment	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

Faculty

5. a) Is the full-time teaching staff covered under a collective bargaining agreement(s)? [1] Yes [2] No

b) What percentage of the full-time teaching staff is employed under a tenure track system and what percentage of these instructors have tenure?

i) Percentage under track tenure system _____%

ii) Percentage under tenure track system with tenure _____%

6. On average, how much influence does each of the following factors have on determining faculty salaries?

	A great deal	Somewhat	Only to a minor extent	None (Not app.)
a) Quality of teaching	[1]	[2]	[3]	[4]
b) Professional activities	[1]	[2]	[3]	[4]
c) Service to the community	[1]	[2]	[3]	[4]
d) Collective bargaining agreement	[1]	[2]	[3]	[4]
e) Interactions with employers	[1]	[2]	[3]	[4]
f) Longevity with institution	[1]	[2]	[3]	[4]
g) Full-time or part-time status	[1]	[2]	[3]	[4]
h) Number of courses taught	[1]	[2]	[3]	[4]
i) Level of education	[1]	[2]	[3]	[4]
j) Research activities	[1]	[2]	[3]	[4]

7. What is your institution's experience with faculty/instructor turnover? For those individuals teaching at your institution today, a year from now what percentage would you estimate would--

a) Be teaching at your institution _____%

b) Not be teaching at your institution at the institution's initiative (firing, layoff, nonrenewal, etc.) _____%

c) Not be teaching at your institution at the instructor's initiative? _____%

TOTAL = 100%

Factors Influencing Curriculum and Instruction

8. In your institution, what degree of importance is attached to each of the following goals?

	Very Important	Important	Not too important	Not at all important
a) Prepare students to be good citizens	[1]	[2]	[3]	[4]
b) Develop basic skills	[1]	[2]	[3]	[4]
c) Develop students' abilities to solve problems and think critically	[1]	[2]	[3]	[4]
d) Prepare students to be competent consumers	[1]	[2]	[3]	[4]
e) Prepare students for further schooling	[1]	[2]	[3]	[4]
f) Provide training for specific occupations	[1]	[2]	[3]	[4]
g) Give students broad, general career preparation	[1]	[2]	[3]	[4]
h) Place students in jobs as they leave school	[1]	[2]	[3]	[4]

9. In your opinion, how much actual influence do the following people or organizations have on (i) establishing or revising the curricula/program (e.g., goals, objectives, content) and (ii) determining instructional approach(es)?

(i) ESTABLISHING OR REVISING THE CURRICULUM

PEOPLE/ORGANIZATIONS	A Great Deal	Some	Only to a Minor Extent	None (Not App.)
a) Chief administrative officer (yourself) or staff	[1]	[2]	[3]	[4]
b) Instructors in department involved	[1]	[2]	[3]	[4]
c) Instructors in other departments	[1]	[2]	[3]	[4]
d) Parents	[1]	[2]	[3]	[4]
e) Students	[1]	[2]	[3]	[4]
f) Institution's advisory or governing board	[1]	[2]	[3]	[4]
g) Faculty unions or associations	[1]	[2]	[3]	[4]
h) Business and industry representatives	[1]	[2]	[3]	[4]
i) JTPA/PIC	[1]	[2]	[3]	[4]
j) State education administrative agencies	[1]	[2]	[3]	[4]
k) Former students	[1]	[2]	[3]	[4]

(ii) DETERMINING INSTRUCTIONAL APPROACHES

PEOPLE/ORGANIZATIONS	A Great Deal	Some	Only to a Minor Extent	None (Not App.)
l) Chief administrative officer (yourself) or staff	[1]	[2]	[3]	[4]
m) Department chair	[1]	[2]	[3]	[4]
n) Instructors	[1]	[2]	[3]	[4]
o) Students	[1]	[2]	[3]	[4]
p) Advisory board or governing board	[1]	[2]	[3]	[4]
q) Faculty unions or associations	[1]	[2]	[3]	[4]
r) Business and industry representatives, e.g., department advisory committee	[1]	[2]	[3]	[4]
s) JTPA/PIC	[1]	[2]	[3]	[4]
t) State administrative agencies	[1]	[2]	[3]	[4]

10. Please indicate your level of agreement with each of the following statements regarding factors that exert influence on curriculum and instruction at your institution. Feel free to comment to qualify or explain a rating. DO NOT FEEL COMPELLED TO COMMENT ON EVERY ITEM.

	FACTORS INFLUENCING CURRICULUM AND INSTRUCTION	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
a.	Inadequate student preparation in basic skills restricts curriculum offerings and instructional delivery **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
b.	Use of part-time or adjunct instructional staff constrains effective instruction **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
c.	Outdated facilities or equipment restrict curriculum offerings or instructional content **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
d.	Resources spent on non-instructional purposes (e.g., security, maintenance) seem excessive and restrict our instructional mission **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
e.	Student discipline problems restrict instructional delivery **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
f.	Because a high percentage of students work, they have limited time to spend on studying outside of class and this constrains instructional programs **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
g.	Collective bargaining/ unionization of faculty restrict curriculum offerings **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
h.	Inadequate student preparation in science and mathematics restricts curricula and instruction **COMMENTS:**	[1]	[2]	[3]	[4]	[5]

	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
i. Community, faculty, or student pressures restrict our ability to cancel certain course offerings **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
j. Inadequate institutional funding restricts curricula and instruction **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
k. Competition for students from other educational institutions or the military cause us to offer certain programs that we otherwise would not offer **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
l. Our open-entry policy restricts program offerings **COMMENTS:**	[1]	[2]	[3]	[4]	[5]

11. a) How often are programs evaluated internally within your institution?

[1] Once a year
[2] Once every two years
[3] Greater than every other year
[4] Evaluated on as needed basis

b) How often are programs evaluated externally?

[1] Once a year
[2] Once every two years
[3] Greater than every other year
[4] Evaluated on as needed basis

12. Has your institution implemented or considered implementing any of the following policy or procedural changes?

	Yes	No
a) Consideration of tighter admission requirements	[1]	[2]
b) Requiring assessment for all incoming students	[1]	[2]
c) Stiffening grading standards	[1]	[2]
d) Placing special emphasis on retention of special need students	[1]	[2]
e) Partial or full merit pay	[1]	[2]
f) Formal recognition of good teaching	[1]	[2]
g) Increasing hiring standards for faculty/instuctors	[1]	[2]

Linkages with External Institutions

13. Does your institution provide facilities or instructors for any of the following? **(Check all that apply)**

	Facilities	Instructors	Neither
a) Students studying for the GED	[1]	[2]	[9]
b) Adult classes (not leading to diploma, degree or certificate)	[1]	[2]	[9]
c) JTPA programs	[1]	[2]	[9]
d) Program sponsored by community-based organizations other than JTPA	[1]	[2]	[9]
e) Special courses or programs for business/ industry in the area (customized training)	[1]	[2]	[9]
f) Courses for military training	[1]	[2]	[9]
g) Apprenticeship programs	[1]	[2]	[9]

14. Does your school provide teaching personnel, administrative support services, etc. for occupational education classes/programs off campus (e.g., in a business or industry or a penal institution)?

[1] Yes (Describe: ______________________________)
[2] No

15. Approximately what percentage of your students were enrolled in cooperative occupational programs (co-op) in 1986-87? ______%

16. Approximately what percentage of the students in your school received credit for co-op experiences during the 1986-87 school year? ______%

17. Do you have any of the following articulation or linkage agreements with any secondary schools--

	Yes	No
a) Secondary school students attend courses that are part of postsecondary programs at your institution	[1]	[2]
b) Secondary school offers first 2 years of a "2+2/tech prep"	[1]	[2]
c) Your postsecondary students currently attend courses at a secondary school and those courses count toward your graduation requirements	[1]	[2]
d) Your postsecondary students may receive credit for courses previously completed at the secondary level	[1]	[2]
e) You are co-located or otherwise share facilities with	[1]	[2]
a secondary school	[1]	[2]
f) Other (Describe ______________________________)	[1]	[2]

18. Is your institution formally represented in community-based economic development activities (e.g., chamber of commerce committees)?

[1] Yes (Explain: ______________________________)
[2] No

19. Is your institution formally represented on a regional or area vocational education planning committee attended by representatives of secondary or other postsecondary institutions?

[1] Yes
[2] No

20. Is your institution formally represented on the Private Industry Council for your JTPA service delivery area?

[1] Yes
[2] No

21. To what degree do the following obstacles hinder you from providing services under JTPA?

	Major obstacle	Minor obstacle	Not an obstacle
a) Lack of knowledge of Act and regulations	[1]	[2]	[3]
b) JTPA restrictions on eligibility, services	[1]	[2]	[3]
c) Amount of documentation, paperwork required	[1]	[2]	[3]
d) Performance-based contracts	[1]	[2]	[3]
e) Uncertainties, delays in contracting process	[1]	[2]	[3]
f) Policies, politics of PIC	[1]	[2]	[3]
g) Other (Describe ____________ ________________________)	[1]	[2]	[3]

22. For the following list, please rank order the organizations that you/your institution place highest priority on in establishing linkages. **(The institutions you place highest priority on should be ranked 1, the next highest a 2, etc.)**

	Rank
a) Organized labor organizations	______
b) Military	______
c) Business and industry (other than for customized training)	______
d) Customized training provision	______
e) JTPA service provision	______
f) Community based organizations	______
g) Other postsecondary institutions (public or private nonprofit)	______
h) Proprietary schools (for profit)	
i) Secondary schools, public or nonprofit	______

Personal Characteristics

23. When were you born? ____________/________ (month / year)

24. What is your sex? [1] Female [2] Male

25. What is your ethnic group? **(Check one)**

[1] American Indian or Alaskan Native
[2] Asian American or Pacific Islander
[3] Black, not of Hispanic origin
[4] Hispanic
[5] White, not of Hispanic origin
[6] Other (Specify: ____________________)

26. Do you have the following degrees, and if so, in what disciplines?

	Major(s)
[1] Some college - no certificate	______________
[2] Associate degree	______________
[3] Bachelor's degree	______________
[4] Bachelor's degree plus some graduate work	______________
[5] Master's degree	______________
[6] Master's degree plus additional graduate work	______________
[7] Doctorate	______________

27. In what year did you complete your highest level of education as noted in Question 26?

____
year

28. How many years of experience have you had as a teacher or faculty member on either a part- or full-time basis--

	Years Full-time	Years Part-time
(a) At the elementary or secondary level?	________	________
(b) At two-year community colleges or voc-tech institutions?	________	________
(c) At proprietary schools?	________	________
(d) At four-year colleges or universities?	________	________
(e) Other ______________________________	________	________

EMPLOYMENT HISTORY

(Please include administrative and instructional positions.)

	29. Current job	30. Last job	31. Second last job	32. Third last job
a) Starting date	______/______ month year	______/______ month year	______/______ month year	______/______ month year
b) Ending date	NA	______/______ month year	______/______ month year	______/______ month year
c) Occupation; job duties	____________ ____________	____________ ____________	____________ ____________	____________ ____________
d) Name of institution; firm	____________ ____________	____________ ____________	____________ ____________	____________ ____________
e) Last (or current) wage or salary	$__________ per [1] hour [3] month [2] week [4] year	$__________ per [1] hour [3] month [2] week [4] year	$__________ per [1] hour [3] month [2] week [4] year	$__________ per [1] hour [3] month [2] week [4] year
f) Supervisory duties (responsible for performance/salary appraisal for 1 or more individuals)	[1] yes [2] no	[1] yes [2] no	[1] yes [2] no	[1] yes [2] no
g) Covered by collective agreement	[1] yes [2] no	[1] yes [2] no	[1] yes [2] no	[1] yes [2] no

Thank you for your time and patience. In the supplement attached, we have asked for some general statistics about your institution that can probably be answered most easily by your institutional research office. We would appreciate it if you could make sure those questions get answered and the supplement is returned to your liaison. Below we have provided you with an opportunity to provide general comments. We would like to receive any comments, but we would particularly like to know about innovative administrative policies or practices, your opinions about the key problems facing postsecondary occupational education, and your ideas about solutions to those key problems.

COMMENTS: (Use back side of paper, if necessary)

ADMINISTRATIVE OFFICIAL SURVEY SUPPLEMENT

Postsecondary Occupational Education Delivery: An Examination

Conducted by:

The National Center for Research
Vocational Education
The Ohio State University

Sponsored by:

Office of Vocational and
Adult Education
U.S. Department of Education

Why we need your help....

Your institution has been selected in a national study of postsecondary occupational education. You have been selected as a representative of your institution to help with that study. Your answers to the questions that follow are very important. They will help provide a basis for describing accurately occupational education as it is offered in postsecondary institutions in this country and should also provide support for future program improvements.

How you can help....

On the pages that follow you will find a number of questions that relate specifically to your community and institution, the kinds of students that attend your institution, and internal and external influences on curriculum and instruction. These questions can be answered quickly by placing an "X" or a check mark "✓" in the "[ ]" next to your answer or by filling in the blank spaces provided. (See the examples shown in the box below.) Please answer all the questions as accurately as possible. Please use a pen to mark your responses.

EXAMPLE 1:

o **Nationally, about what percentage of high school students drop out each year?**

- [1] **Between 4% and 8%**
- [2] **Slightly less than 15%**
- [✓ [3] **About 28%**]
- [4] **Over 50%**

EXAMPLE 2:

o **About what percentage of the students in your institution are:**

(a) Females? 53 %
(b) Males? 47 %

When you have completed your questionnaire, (a) fold it in half, (b) staple or tape it together, and (c) return it to the institutional liaison whose name is listed below. Your participation in this study is voluntary. In addition, the information you provide will be treated in the strictest confidence; no data will be associated with the name of an individual or institution in any project-related reports or other form of information dissemination. All data will be aggregated across individuals and institutions and described only at the national levels.

INSTITUTIONAL LIAISON Name:________________________________
Address:________________________________

Name:____

Title:____

Community Characteristics

S1. Type of area in which your institution is located?
[1] Rural
[2] Suburban
[3] Urban

S2. What is the approximate population in the area served by your institution?

________ people

S3. Approximately what percentage of the population in the area served by your institution is--

(a) American Indian or Alaskan Native? _____%
(b) Asian American or Pacific Islander? _____%
(c) Black, not of Hispanic origin? _____%
(d) Hispanic? _____%
(e) White, not of Hispanic origin? _____%
(f) Other _____%
100%

S4. Approximately what percentage of the population in the area served by your institution is economically disadvantaged? _____%

Institutional Characteristics

S5. What was the size of your institution's enrollment of full-time and part-time students, by program type for 1985-86?

	(i) Full-time	(ii) Part-time
a) In occupational programs	_______	_______
b) In transfer or general programs	_______	_______

Student Characteristics

S6. Selected student body characteristics

a) Gender -
_____% Females
_____% Males

b) Ethnicity/ Race
_____% Native American or Alaskan Native
_____% Asian American or Pacific Islander
_____% Black, not of Hispanic origin
_____% Hispanic
_____% White, not of Hispanic origin
_____% Other

c) Handicapped - _____%

d) Limited English proficiency - _____%

e) Estimated family income -
_____% above $25,000
_____% between $15,000 and $25,000
_____% between $14,999 and $10,000
_____% below $10,000

f) Students who enter, but leave prior to receiving degrees or certificates - _____%

g) Students who are single parents - _____%

S7. What are your institution's admission requirements?

____
____

S8. Of the handicapped students in your institution, what percentage are--

a) physically handicapped?	_____%
b) mild/moderately learning disabled	_____%
c) both physically and learning disabled	_____%
d) emotionally/socially impaired	_____%
	100%

S9. a) Approximately what percentage of your institution's handicapped students enroll in--

developmental education programs? _____%

b) Approximately what percentage enroll in major programs that are occupational and transfer/general programs?

occupational	_____%
transfer/general	_____%
TOTAL =	100%

S10. By what process are the students in your school classified as limited English proficient (LEP)? (Describe: ______________________________
____
____)

S11.a) Approximately what percentage of your school's LEP students enroll in--

developmental education programs? _____%

b) Approximately what percentage enroll in major programs that are occupational and transfer/general programs?

occupational	_____%
transfer/general	_____%
TOTAL =	100%

S12.a) What is your institution's total operating budget for its current fiscal year? $ ____________

b) What percentage of the budget is funded by the following sources:

Community/county ________%
State ________%
Federal ________%
Tuition ________%
Private donations/gifts ________%
Other ________%
TOTAL = 100%

c) What percentage of the budget is spent on:

Instruction ________%
Administration ________%
Student services ________%
Equipment ________%
Facilities/capital improvement ________%
Other ________%
TOTAL = 100%

Funding

S13.a) How much money will your institution receive under the Carl Perkins Vocational Education Act for the 1986-87 school year?
$ ____________

b) How much will come from the JTPA? $ ____________

Activities Under Job Training Partnership Act (JTPA)

S14. During the 1985-86 academic year, how many JTPA clients were enrolled in:

a) Special class-size occupational training programs conducted only for JTPA clients? ____________ clients

(1) Were these conducted under performance based contracts? Yes [1] No [2]

(2) What occupational skills were taught in these classes? (e.g., word processing, building maintenance) ____________
____
____

b) How many JTPA clients were enrolled in regular occupational programs on an individual referral basis? ____________ clients

c) How many JTPA clients were enrolled in basic/remedial education or GED programs? ____________ clients

S15. Does your institution provide any of these services under JTPA?

	Yes	No
a) Acts as the administrative entity for SDA	[1]	[2]
b) Conducts intake, assessment, counseling, and referral	[1]	[2]
c) Certifies eligibility for JTPA assistance	[1]	[2]
d) Writes on-the-job training contracts with employers	[1]	[2]
e) Runs job clubs	[1]	[2]
f) Conducts job development	[1]	[2]
g) Provides support services (e.g., day care, transportation allowances)	[1]	[2]
h) Other [Describe ________________________]	[1]	[2]

Thank you. Please return to your institutional liaison.

PLACEMENT DIRECTOR

Postsecondary Occupational Education Delivery: An Examination

Conducted by:

The National Center for Research in Vocational Education
The Ohio State University

Sponsored by:

Office of Vocational and Adult Education
U.S. Department of Education

Why we need your help....

Your institution is helping in a national study of postsecondary education. You have been selected as a representative of your institution to help with that study. Your answers to the questions that follow are very important. They will help provide a basis for more accurately describing the occupational education offered in our postsecondary institutions and should also provide support for future program improvements.

How you can help....

On the pages that follow you will find a number of questions that deal with your background and experience, the kinds of career guidance provided by your school, and characteristics of your office. These questions can be answered quickly by placing an "X" or a check mark "✓" in the "[3]" next to your answer or by filling in the blank spaces provided. (See the two examples shown in the box below.) Please answer all the questions as accurately as possible. Please use a pen to mark your responses.

EXAMPLE 1:

o Nationally, about what percentage of high school students (grades 9-12) drop out each year?

[1] Between 4% and 8%
[2] Slightly less than 15%
[✓ [3]] About 28%
[4] Over 50%

EXAMPLE 2:

o About what percentage of the in your institution are:

(a) Females? 53 %
(b) Males? 47 %

When you have completed your questionnaire, (a) fold it in half, (b) staple or tape it together, and (c) return it to the institutional liaison whose name is listed below. Again, we want to note that your participation in this study is voluntary. In addition, the information you provide will be treated in the strictest confidence; no data will be associated with the name of an individual or institution in any project-related reports or other form of information dissemination. All data will be aggregated across individuals and institutions and described only at the national level.

WOULD YOU LIKE A SUMMARY REPORT OF OUR STUDY? ☐ YES ☐ NO

INSTITUTIONAL LIAISON

Name:____________________
Address:____________________

Name:____

Title:____

Institution:____________________________________

Career Guidance and Student Services

1. Rank the following goals in terms of the degree to which they are emphasized by the placement program in your institution. **(WRITE IN THE RANK—1 BEING HIGHEST, 2 NEXT HIGHEST, AND SO FORTH. DO NOT DUPLICATE RANKINGS.)**

	Rank
(a) Help students plan and prepare for additional schooling	____
(b) Help students with their personal growth and development	____
(c) Help students plan and prepare for their careers after leaving your institution	____
(d) Help place students in employment related to their training	____
(e) Help students select and schedule courses	____
(f) Help particular special groups of students such as the handicapped, economically disadvantaged, and limited English proficient progress through your institution	____

2. Does your institution provide occupational or career information to students in a language other than English?

[1] No
[2] Yes, Spanish
[3] Yes, another language (Specify: ____________)

3. Does the placement/guidance/counseling staff in your institution administer occupational aptitude or interest tests to students?

[1] No
[2] Yes, to all students
[3] Yes, to any student who requests them

4. About what percentage of the students in your institution participate in the following activities between the time they enter and leave your institution? **(WRITE PERCENTS. IF UNSURE, GIVE YOUR BEST ESTIMATE. IF THE ACTIVITY IS NOT OFFERED, ENTER "0".)**

(a) Exploratory work experience programs (e.g., co-op/work study)	____%
(b) Career days/nights	____%
(c) Job site tours or visits (field trips)	____%
(d) Visits to other postsecondary institutions	____%
(e) Job shadowing (extended observations of a worker)	____%
(f) Testing and having tests interpreted for career planning purposes (e.g., interest inventories, vocational aptitude tests)	____%

(g) Individual counseling sessions _____%
(h) Group guidance/counseling sessions _____%
(i) Training in job seeking skills _____%
(j) Training in resume writing _____%
(k) Use of computerized career information resources _____%
(l) Use of noncomputerized career information resources _____%

(m) Have no contact with the placement office _____%

Placement Office Characteristics

5. How many professional staff in your institution work full-time, half-time, and less than half-time in the placement office?

(a) Number of full-time professional staff _____
(b) Number of half-time professional staff _____
(c) Number of professional staff who work less than half-time _____

6. If a student wants to see a placement counselor, about how long does he or she typically have to wait?

[1] No wait--can walk right in
[2] A few minutes to an hour
[3] A few hours
[4] A day or two
[5] Three days or more

7. Over the course of an academic year, how involved does your staff get in the following activities?

	Never	Infreq.	Occasionally	Routinely
(a) Administrative duties not related to placement or career guidance	[1]	[2]	[3]	[4]
(b) Teaching employability skill or career guidance-related courses	[1]	[2]	[3]	[4]
(c) Teaching classes (nonguidance related)	[1]	[2]	[3]	[4]
(d) Planning for, administering, and interpreting tests	[1]	[2]	[3]	[4]
(e) Updating and obtaining information from records (e.g., permanent records for reports, planning)	[1]	[2]	[3]	[4]
(f) Individual counseling of students	[1]	[2]	[3]	[4]
(g) Conferring with instructors or other instructional personnel regarding the placement program	[1]	[2]	[3]	[4]
(h) Directing extracurricular activities	[1]	[2]	[3]	[4]
(i) Directing planned career guidance activities (e.g., career days, plant visits)	[1]	[2]	[3]	[4]

	Never	Infreq.	Occasionally	Routinely
(j) Developing contacts with business and industry	[1]	[2]	[3]	[4]
(k) Meeting with recruiters from other postsecondary institutions or the military	[1]	[2]	[3]	[4]
(l) Working with JTPA and/or JTPA-sponsored agencies and other community-based organizations	[1]	[2]	[3]	[4]

8. To what extent do you or other individuals in the placement office get involved in curricular decision making? **(MARK ONE)**

   [1] It has never happened
   [2] It has occurred on a few occasions
   [3] It has occurred several times, but not on a regular basis
   [4] It occurs regularly

Placement

9. Which of the following sources of information about job opportunities does your institution have available for student use regarding part-time jobs while in school and full-time, post-school jobs? **(MARK ALL THAT APPLY)**

	Part-time	Full-time
(a) Job bank listings or reports from state Employment Service or Department of Labor, showing jobs available for local area (city or state)	[1]	[2]
(b) Postings of local newspaper employment advertisements	[1]	[2]
(c) Job openings called in by employers	[1]	[2]
(d) List of contacts at public or private employment agencies and training programs (e.g., JTPA) who can help students get jobs or job training	[1]	[2]
(e) Information from local government (city, county, state) civil service and employment offices in the area	[1]	[2]
(f) Information about local jobs from follow-ups of former students who work	[1]	[2]
(g) Other (Specify: ____________________ ____)	[1]	[2]
(h) No job information is routinely made available to students	[1]	[2]

10. a) Approximately how many different employers ask your office for referrals for full-time positions in a year?

   [1] None
   [2] One to five
   [3] Six to ten
   [4] Eleven to twenty
   [5] Twenty-one to fifty
   [6] Fifty-one or more

   b) What percentage of those referrals are a result of your office's direct initiative? ______%

11. From your experience at this institution, what are the most effective strategies for developing jobs? (Check all that apply)

[1] Telephone contacts
[2] In person visits
[3] Community organization memberships
[4] Co-op or internship programs
[5] Referrals from instructors or other staff at the institution
[6] Working with a government agency(ies)
[7] Other ______________________________
____
____

[9] We don't engage in job development activities

12. Are follow-up contacts made with employers of students placed in jobs?

[1] No
[2] Yes, through our office
[3] Yes, through another unit at the institution ____________
[4] Don't know

13. Of former students in your institution, about what percentage (If uncertain, give your best estimate)

	Program Noncompleters	Program Completers
(a) ...entered the military?	_____%	_____%
(b) ...enrolled in a 4-year college or university?	_____%	_____%
(c) ...enrolled in another 2-year college or technical school?	_____%	_____%
(d) entered the labor force full-time without attending another postsecondary institution?	_____%	_____%
(e) Other (Specify: ____________ ______________________________)?	_____%	_____%
	100%	100%

14. The response to 13(d) for program completers represents your institution's placement rate. For that placement rate, what percentage are placed in jobs related to the training or program areas from which the students graduated?

[1] Less than 10%
[2] 10% - 25%
[3] 25% - 50%
[4] 50% - 75%
[5] 75% - 90%
[6] 90% - 99%
[7] 100%

Personal and Job Characteristics

15. Including this year, how many years of experience have you had involving placement or career guidance in postsecondary institutions?

[1] Not yet a full year
[2] One to two years
[3] Three to four years
[4] Five to six years
[4] Seven to ten years
[6] Over ten years

16. What is the highest degree you hold?

[1] High school diploma
[2] Associate degree
[3] Bachelor or Arts/Bachelor of Science
[4] Master's degree
[5] Specialist in Education
[6] Educational Doctorate
[7] Doctorate other than education
[8] Other (Specify: ____________________)

17. Do you have a degree in guidance and counseling?

[1] No
[2] Yes

18. Prior to this position, what type of position did you hold?

[1] Staff member of placement office
[2] Staff member of institution (non instructional position)
[3] Instructor at institution
[4] Staff member of another educational institution
[5] Employee of business or industry
[6] Other: ____________________
____

19. Do you or anyone else on your institution's placement or guidance staff participate in community-wide economic development activities (e.g., chamber of commerce committees or other committees directed toward attracting new business/industry into your community)?

[1] No
[2] Yes (Describe: ____________________
____________________)

20. When were you born? ______/_______
month year

21. What is your sex?

[1] Female
[2] Male

22. What is your ethnic origin?

[1] American Indian or Alaskan Native
[2] Asian American or Pacific Islander
[3] Black, not of Hispanic origin
[4] Hispanic
[5] White, not of Hispanic Origin
[6] Other

You have finished the questionnaire. Thank you.

NOTES/COMMENTS:

CHAIRPERSON

Postsecondary Occupational Education Delivery: An Examination

Conducted by:
National Center for Research
in Vocational Education
The Ohio State University

Sponsored by:
Office of Vocational and
Adult Education
U.S. Department of Education

Why we need your help....

Your institution has been selected for a national study of postsecondary occupational education. You have been selected as a representative of your institution to help with that study. Your answers to the questions that follow are very important. They will help provide a basis for describing accurately occupational education as it is offered in postsecondary institutions and should also provide support for future program improvements.

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EXAMPLE 1:

o Nationally, about what percentage of high school students dropout each year?

- [1] **Between 4% and 8%**
- [2] **Slightly less than 15%**
- [✓ [3] **About 28%**]
- [4] **Over 50%**

EXAMPLE 2:

o About what percentage of the students in your institution are:

(a) Females? 53 %
(b) Males? 47 %

When you have completed your questionnaire, (a) fold it in half, (b) staple or tape it together, and (c) return it to the institutional liaison whose name is listed below. Your participation in this study is voluntary. In addition, the information you provide will be treated in the strictest confidence; no data will be associated with the name of an individual or institution in any project-related reports or other form of information dissemination. All data will be aggregated across individuals and, institutions and described only at the national level.

WOULD YOU LIKE A SUMMARY REPORT OF OUR STUDY? [ ] YES [ ] NO

INSTITUTIONAL LIAISON

Name:______________________
Address:______________________

1. Name: ____

2. Institution: ____________________________________

3. Program/Department: ______________________________

Program Characteristics

4. How many students (FTEs) are enrolled in your program currently?
_______ students (FTEs)

5. a) How many faculty and instructors (FTEs) are currently in your program? (Include permanent faculty who may be on leave.)
_______ instructors (FTEs)

b) How many faculty included in your answer to a) are permanent, full-time instructors? _______ instructors

6. a) What is your departmental/program total budget for the 1986-87 academic year? $____________________

b) Of that budget, how much funding do you receive from federal vocational education funds, i.e. Carl Perkins? $_______________

c) Of that budget, how much do you receive from JTPA? $_______________

7. a) Does your program/department have an advisory board?
[1] Yes
[2] No (Go to Question 8)

b) How many members are on the board? __________________ members

c) How often does the advisory board meet? (Check one)
[1] At least once a month, on a regular basis
[2] Not as often as once a month, but on a regular basis
[3] Once a year, on a regular basis
[4] Only meet on an as needed basis

d) How many members would you characterize as being from business or industry? ____________ members

e) How many members would you characterize as representing organized labor? ____________ members

Program Content

8. What type of degree/certificate do you award to individuals who complete your program?

[1] Vocational certificate
[2] Associate Degree
[3] Other: _______________ ____________________

9. How many courses must a typical student who enrolls in your program complete to be awarded a degree certificate? (Do not include developmental education or LEP courses)

Type of grading period **(MARK ONE)**

________courses

[1] Semester
[2] Quarter
[3] Other:________________

10. How many students were awarded a degree/certificate from your department in the 1985-86 academic year? _______ students

11. If 100 students began your program, how many would you estimate to:
   a) **Complete the program in the mimimal possible time (1 year or less for a 1 year program; 2 years or less for a 2 year program)?** _____
   b) Complete the program, but in longer than the minimal possible time? _____
   c) Leave the program at your initiative (Failing grades, advised to leave, etc.)? _____
   d) Leave the program for other reasons (Took a job, tranferred to another program or institution, etc.)? _____

TOTAL = 100

12. In your opinion, how much actual influence do the following people or organizations have on (i) establishing or revising the curricula/program (e.g., goals, objectives, content) and (ii) determining instructional methods?

(i) ESTABLISHING OR REVISING THE CURRICULUM

PEOPLE/ORGANIZATIONS	A Great Deal	Some	Only to a Minor Extent	None (Not Applicable)
a) Institution's administration	[1]	[2]	[3]	[4]
b) Chairperson and instructors in department involved	[1]	[2]	[3]	[4]
c) Instructors in other departments	[1]	[2]	[3]	[4]
d) Parents	[1]	[2]	[3]	[4]
e) Students	[1]	[2]	[3]	[4]
f) Institution's advisory or governing board	[1]	[2]	[3]	[4]
g) Faculty unions or associations	[1]	[2]	[3]	[4]
h) Business and industry representatives, including program's advisory committee	[1]	[2]	[3]	[4]
i) JTPA/PIC	[1]	[2]	[3]	[4]
j) State education administrative agencies	[1]	[2]	[3]	[4]
k) Former students	[1]	[2]	[3]	[4]

(ii) DETERMINING INSTRUCTIONAL METHODS

PEOPLE/ORGANIZATIONS	A Great Deal	Some	Only to a Minor Extent	None (NA)
l) Institution's administration	[1]	[2]	[3]	[4]
m) Department chair (yourself)	[1]	[2]	[3]	[4]
n) Instructors	[1]	[2]	[3]	[4]
o) Students	[1]	[2]	[3]	[4]
p) Institution's advisory or governing board	[1]	[2]	[3]	[4]
q) Faculty unions or associations	[1]	[2]	[3]	[4]
r) Business and industry representatives, e.g., department advisory committee	[1]	[2]	[3]	[4]
s) JTPA/PIC	[1]	[2]	[3]	[4]
t) State administrative agencies	[1]	[2]	[3]	[4]

13. Consider the typical student who completes your program. What percentage of the curriculum that the student was exposed to would you estimate--
    - a) Concerned specific occupational skills development? ________%
    - b) Concerned general or transferable skills development such as communication skills, interpersonal skills? ________%
    - c) Concerned basic skills (math, writing, speaking, listening) development? ________%
    - d) Concerned employability skills (resume, job search, interviewing)? ________%

14. Are students in your program required to complete a work-study experience, cooperative education experience, or internship in business/industry as part of their training?

    [1] No
    [2] Yes, up to two weeks
    [3] Yes, three to six weeks
    [4] Yes, seven to twelve weeks
    [5] Yes, thirteen to twenty-four weeks
    [6] Yes, over twenty-four weeks

15. Do the employers who supervise the work experiences of your students influence the grades those students receive?

    [1] No, our program does not usually get involved with work experience programs
    [2] No
    [3] Yes, employers recommend grades to the coordinator(s)
    [4] Yes, employers assign work experience grades
    [5] Yes, employers and coordinators jointly agree and assign students' grades

16. Are individualized learning activities and experiences an integral part of your program?

    [1] No
    [2] Yes, when dealing with learning basic concepts/theory
    [3] Yes, when working in shop/lab on job skill development practice
    [4] Yes, all segments of program

17. Which of the following competency-based strategies are used in your program?

a) Our particular program is not competency-based and we do not use these competency-based strategies [9] (Go to item 18)

	Yes	No
b) Progress charts	[1]	[2]
c) Mastery charts	[1]	[2]
d) Computer recording	[1]	[2]
e) Standardized written tests	[1]	[2]
f) Standardized skills performance tests	[1]	[2]
g) Informal teacher judgments	[1]	[2]
h) Teacher constructed written tests	[1]	[2]
i) Teacher constructed skills performance tests	[1]	[2]
j) Judgments or ratings by employers	[1]	[2]
k) Other (Specify: ___________)	[1]	[2]

Faculty Issues

18. On average, how much influence do each of the following factors have on determining faculty salaries?

	A great deal	Somewhat	Only to a minor extent	None (Does not apply)
a) Quality of teaching	[1]	[2]	[3]	[4]
b) Professional activities	[1]	[2]	[3]	[4]
c) Service to the community	[1]	[2]	[3]	[4]
d) Collective bargaining agreement	[1]	[2]	[3]	[4]
e) Interactions with employers	[1]	[2]	[3]	[4]
f) Longevity with institution	[1]	[2]	[3]	[4]
g) Full-time or part-time status	[1]	[2]	[3]	[4]
h) Number of courses taught	[1]	[2]	[3]	[4]
i) Level of education	[1]	[2]	[3]	[4]
j) Research activities	[1]	[2]	[3]	[4]

19. How often do you visit the classroom instructional period for permanent and temporary staff per grading period (quarter or semester?)

	Permanent Staff	Temporary Staff
a) Announced visits per grading period	________	________
b) Unannounced visits per grading period	________	________

20. Does your program/department have a formal professional development requirement for instructors?

[1] Yes-> Please describe:______________________________________
[2] No ____

21. What is your departmental budget for professional development activities for the 1986-87 academic year? $____________

22. How large was your program's instructional staff last year and how many of your instructional staff from last year (1985-86) are teaching or will teach this year?

	Permanent staff		Temporary or adjunct	
	Full-time	Part-time	Full-time	Part-time
a) Taught sometime during 1985-86	________	________	________	________
b) Will teach sometime during 1986-87	________	________	________	________

Institutional Goals

23. In your institution, what degree of importance is attached to each of the following goals? **(Check one per goal)**

Goals	Very Important	Important	Not too Important	Not at all Important
a) Prepare students to be good citizens	[1]	[2]	[3]	[4]
b) Develop basic skills	[1]	[2]	[3]	[4]
c) Develop students' abilities to solve problems and think critically	[1]	[2]	[3]	[4]
d) Prepare students to be competent consumers	[1]	[2]	[3]	[4]
e) Prepare students for further schooling	[1]	[2]	[3]	[4]
f) Provide in-school training for specific occupations	[1]	[2]	[3]	[4]
g) Give students a broad, general career preparation background	[1]	[2]	[3]	[4]
h) Place students in jobs as they leave school	[1]	[2]	[3]	[4]

24. Do you agree or disagree with each of the following factors in terms of their influence on curriculum and instruction at your institution? Feel free to add comments to qualify or explain a rating. **DO NOT FEEL COMPELLED TO COMMENT ON EVERY ITEM.**

Factors	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
a) Inadequate student preparation in basic skills restricts curriculum offerings and instructional delivery **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
b) Use of part-time or adjunct instructional staff limits effective instruction **COMMENTS:**	[1]	[2]	[3]	[4]	[5]

Factors	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
c) Outdated facilities or equipment restrict curriculum offerings or instructional content **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
d) Resources spent on noninstructional purposes (e.g., security, maintenance) seem excessive and restrict our instructional mission **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
e) Student discipline restricts instructional delivery **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
f) Because a high percentage of students work, they have limited time to spend on studying outside of class and this constrains instructional programs **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
g) Collective bargaining/unionization of faculty restrict curriculum offerings **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
h) Inadequate student preparation in science and mathematics restricts curricula and instruction **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
i) Community, faculty, or student pressures restrict our ability to cancel certain course offerings **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
j) Inadequate institutional funding restricts curricula and instruction **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
k) Competition for students from other educational institutions or the military cause us to offer certain programs that we otherwise wouldn't **COMMENTS:**	[1]	[2]	[3]	[4]	[5]
l) Our open-entry policy restricts program offerings **COMMENTS:**	[1]	[2]	[3]	[4]	[5]

Facilities

25. Please rank order the three most important facilities/equipment you feel would most improve your program. **(The most important need would be ranked 1.)**

Rank

a) Classroom renovation/improvement ______
b) Larger laboratory facilities ______
c) More modern laboratory equipment ______
d) Instructional equipment such as A-V, computers, etc. ______
e) Instructional demonstration equipment--models ______
f) Office space ______
g) Office equipment (e.g., personal computers for faculty) ______
h) Other:________________________________ ______

26. What is the approximate value of facilities or equipment donated to your program by business or industry over the last three years?

[1] No donations received over that period of time
[2] $1 - $5,000
[3] $5,000 - $10,000
[4] $10,000 - $25,000
[5] $25,000 - $50,000
[6] $50,000 - $100,000
[7] Greater than $100,000

Students

27. In your program, about what percentage of the students are . . .

a) Females? ______%
b) Males? ______%
TOTAL = 100%

c) White? ______%
d) Black? ______%
e) Hispanic? ______%
f) Other minorities? ______%
TOTAL = 100%

g) Handicapped? ______%

h) Limited English Proficienct (LEP/ Bilingual)? ______%

i) Economically disadvantaged? ______%

j) JTPA clients? ______%

k) Single parents? ______%

28. What percentage of your students receive the following special services?

a) Developmental instruction-basic reading ________%
b) Developmental instruction-basic math ________%
c) Pre-tech courses ________%
d) More individualized and intensive counseling and follow-through from departmental staff ________%
e) Special tutorial and/or related types of assistance (peer tutoring, e.g.) ________%

Program Improvement

29. Over the past two years, has your department/program undertaken any of the following activities or policy changes?

	Yes	No
a) Increased completion requirements	[1]	[2]
b) Implemented competency testing for completion	[1]	[2]
c) Increased entrance requirements for program	[1]	[2]
d) Stiffened grading standards	[1]	[2]
e) Explicitly decided to increase emphasis on basic skills	[1]	[2]
f) Added requirements for courses outside your department/program	[1]	[2]
g) Stiffened hiring standards for instructors/faculty	[1]	[2]
h) Placed special emphasis on retention of special needs students	[1]	[2]

Personal and Job Characteristics

30. During 1985-86 academic year (September-June), how many courses and credit hours did you teach?

Courses ________
Credit hours ________

Quarter System [1]
Semester [2]
Other: ____________________ [3]

31. What is the average size of the classes you teach? __________students

32. Have you received training in any of the following areas?

	Yes	No
a) Teaching the handicapped	[1]	[2]
b) Working with and teaching Limited English Proficiency students (LEP/Bilingual)	[1]	[2]
c) Teaching disadvantaged and dropout prone students	[1]	[2]
d) Working with and teaching students in nontracitional programs	[1]	[2]
e) Teaching basic skills in your subject area	[1]	[2]
f) Addressing the needs of single parents	[1]	[2]

33. In addition to the hours you teach during a typical week, about how many hours outside of class do you spend doing each of the following activities? **(IF UNSURE, GIVE YOUR BEST ESTIMATE.)**

	HOURS SPENT:					
	0	1-4	5-8	9-12	13-20	Over 20
a) Official office hours	[1]	[2]	[3]	[4]	[5]	[6]
b) Completing forms and administrative paperwork	[1]	[2]	[3]	[4]	[5]	[6]
c) Prepare instructional periods, composing tests, grading papers, etc.	[1]	[2]	[3]	[4]	[5]	[6]
d) Counseling students - personal problems	[1]	[2]	[3]	[4]	[5]	[6]
e) Counseling students - career plans	[1]	[2]	[3]	[4]	[5]	[6]
f) Tutoring and working with students who need special help	[1]	[2]	[3]	[4]	[5]	[6]
g) Contacting employers on students' behalf and visiting students at worksites	[1]	[2]	[3]	[4]	[5]	[6]
h) Undertaking research activities in your subject area	[1]	[2]	[3]	[4]	[5]	[6]
i) Extra-curricular activities (including coaching)	[1]	[2]	[3]	[4]	[5]	[6]
j) Working - self-employed	[1]	[2]	[3]	[4]	[5]	[6]
k) Working - employer other than this institution (not self-employed)	[1]	[2]	[3]	[4]	[5]	[6]
l) Background reading in your subject area (e.g., journals, books, periodicals)	[1]	[2]	[3]	[4]	[5]	[6]
m) Other background reading (e.g., changes in education, equity issues, teaching special students)	[1]	[2]	[3]	[4]	[5]	[6]
n) Developing alternative activities and materials to better meet the needs of students who require special help (e.g., potential dropouts, handicapped students	[1]	[2]	[3]	[4]	[5]	[6]
o) Obtaining additional professional training	[1]	[2]	[3]	[4]	[5]	[6]

34. When were you born? ____________ / ____________
month year

35. What is your sex?
[1] Female
[2] Male

36. What is your ethnic group? **(Check one)**

[1] American Indian or Alaskan Native
[2] Asian American or Pacific Islander
[3] Black, not of Hispanic origin
[4] Hispanic
[5] White, not of Hispanic origin
[6] Other

37. Do you have the following degrees, and if so, in what disciplines? **(ANSWER ALL THAT APPLY)**

Discipline(s)

a) Associate degree ____________
b) Bachelor's degree ____________
c) Master's degree ____________
d) Doctorate ____________

38. In what year did you complete your highest level of education as noted in Question 37?

____
year

39. How many years of experience have you had as a teacher or faculty member on either a part- or full-time basis--

	Years Full-time	Years Part-time
(a) At the elementary or secondary level?	________	________
(b) At two-year community colleges or voc-tech institutions?	________	________
(c) At proprietary schools?	________	________
(d) At four-year colleges or universities?	________	________
(e) Other ______________________________	________	________

EMPLOYMENT HISTORY

(Please include administrative and instructional positions.)

	40. Current job	41. Last job	42. Second last job	43. Third last job
a) Starting date	______/______ month year	______/______ month year	______/______ month year	______/______ month year
b) Ending date	NA	______/______ month year	______/______ month year	______/______ month year
c) Occupation; job duties	____________ ____________	____________ ____________	____________ ____________	____________ ____________
d) Name of institution; firm	____________ ____________	____________ ____________	____________ ____________	____________ ____________
e) Last (or current) wage or salary	$__________ per [1] hour [3] month [2] week [4] year	$__________ per [1] hour [3] month [2] week [4] year	$__________ per [1] hour [3] month [2] week [4] year	$__________ per [1] hour [3] month [2] week [4] year
f) Supervisory duties (responsible for performance/salary appraisal for 1 or more individuals)	[1] yes [2] no	[1] yes [2] no	[1] yes [2] no	[1] yes [2] no
g) Covered by collective agreement	[1] yes [2] no	[1] yes [2] no	[1] yes [2] no	[1] yes [2] no

YOU HAVE COMPLETED THE QUESTIONNAIRE. THANK YOU.

FACULTY

Postsecondary Occupational Education Delivery: An Examination

Conducted by:

The National Center for Research
in Vocational Education
The Ohio State University

Sponsored by:

Office of Vocational and Adult
Education
U.S. Department of Education

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EXAMPLE 1:

o Nationally, about what percentage of high school students drop out each year?

- **[1] Between 4% and 8%**
- **[2] Slightly less than 15%**
- **[✓ [3] About 28%]**
- **[4] Over 50%**

EXAMPLE 2:

o About what percentage of the students in your institution are:

(a) Females? __53__ %
(b) Males? __47__ %

When you have completed your questionnaire, (a) fold it in half, (b) staple or tape it together, and (c) return it to the institutional liaison whose name is listed below. Your participation in this study is voluntary. In addition, the information you provide will be treated in the strictest confidence; no data will be associated with the name of an individual or institution in any project-related reports or other form of information dissemination. All data will be aggregated across individuals and institutions and described only at the national level.

WOULD YOU LIKE A SUMMARY REPORT OF OUR STUDY? [ ] YES [ ] NO

INSTITUTIONAL LIAISON:

Name: ______________________________
Address: ______________________________

1. Name: ______________________________

2. Institution: ________________________

3. Program: ___________________________

Teaching Load

4. During 1986-87 academic year (September - June), how many different courses and total credit hours will you teach?

_______ courses
_______ credit hours

Type of grading period
  [1] Quarter System
  [2] Semesters
  [3] Other: ____________________

5. On average, how many hours per week are you assigned to teach (contact hours)? **(Include labs and discussion periods. Exclude preparation time, office hours.)**

_______ hours

6. What is the average size of the classes you teach?

_______ students

7. About how many undergraduate and graduate courses have you taken in the subject area that you most frequently teach?

	None	1-5	6-10	11-15	15+
(a) Undergraduate courses	[1]	[2]	[3]	[4]	[5]
(b) Graduate courses	[1]	[2]	[3]	[4]	[5]

8. Have you taught courses in a different department in the last two years?

[1] Yes What department(s) ______________________________
[2] No ______________________________

9. Do you have state certification to teach? If so, for how long?

[9] State does not require certification (Go to question 10)

[1] Not certified
[2] Yes, 1 year or less
[3] Yes, 2 - 5 years
[4] Yes, 5 - 10 years
[5] Yes, 10+ years

Instructional Methods

10. How much influence and control do you have over each of the following areas with respect to the courses you are assigned to teach?

	None				A Great Deal
(a) Establishing a new course in your program area/department	[1]	[2]	[3]	[4]	[5]
(b) Selecting the content, topics, and skills to be taught in specific courses	[1]	[2]	[3]	[4]	[5]
(c) Selecting instructional techniques to be used	[1]	[2]	[3]	[4]	[5]
(d) Selecting textbooks and other instructional materials	[1]	[2]	[3]	[4]	[5]

11. How much time per month do you spend on average with the following groups or individuals to work on course planning and preparation, curriculum development, guidance and counseling, program/course evaluation, or other collaborative work related to instruction?

HOURS SPENT PER MONTH:

	None	1-5	6-10	11-20	20+
(a) Department head or other supervisor	[1]	[2]	[3]	[4]	[5]
(b) Institutional official(s) - other than those listed in "a"	[1]	[2]	[3]	[4]	[5]
(c) Advisory committee	[1]	[2]	[3]	[4]	[5]
(d) Other instructors	[1]	[2]	[3]	[4]	[5]
(e) Guidance/counseling staff or placement staff	[1]	[2]	[3]	[4]	[5]
(f) Employers (other than on advisory committee)	[1]	[2]	[3]	[4]	[5]

12. Have you had any training (inservice or preservice) in the following general areas?

	Yes	No
(a) Teaching the handicapped	[1]	[2]
(b) Working with and teaching Limited English Proficiency students (LEP/Bilingual)	[1]	[2]
(c) Teaching disadvantaged and at-risk students	[1]	[2]
(d) Working with and teaching students in programs nontraditional for their sex	[1]	[2]
(e) Teaching basic skills in your subject area	[1]	[2]
(f) Addressing the needs of single parents	[1]	[2]
(g) Addressing the needs of older students	[1]	[2]

13. Indicate the importance you give each of the following grading criteria when setting grades.

	Not Important	Somewhat Important	Moderately Important	Very Important
(a) Absolute level of achievement	[1]	[2]	[3]	[4]
(b) Achievement relative to the rest of the class or all of your classes	[1]	[2]	[3]	[4]
(c) Individual improvement or progress over past performance	[1]	[2]	[3]	[4]
(d) Effort	[1]	[2]	[3]	[4]
(e) Participation in class	[1]	[2]	[3]	[4]

14. For each grading period of _____ weeks, how many times do you usually administer a . . . **(fill in)**

(a) . . . Major examination or student demonstration
- [1] Zero
- [2] One
- [3] Two
- [4] Three or four
- [5] Five or more

(b) . . . Quiz
- [1] Zero
- [2] One or two
- [3] Three or four
- [4] Five to ten
- [5] Over ten

15. Classifying the types of questions that might be asked on a major examination into objective, subjective (essay), or demonstration-type questions, what percentage of the points on one of your typical examinations would be accounted for by each type of question?

a) Objective _______%
b) Subjective _______%
c) Demonstration _______% --> (perform a skill that might be done in the workplace, e.g., typing tests for speed and accuracy, building a model, etc.)

16. In some classes, instructors feel it is beneficial to assign various writing tasks to their students. In your classes, how many writing assignments of at least one page each do you assign your students during a quarter or semester?

- [1] None
- [2] One or two assignments
- [3] Three or four assignments
- [4] Five or six assignments
- [5] Seven to ten assignments
- [6] Over ten assignments

17. During a typical week, how much of your teaching time is spent reinforcing and enhancing students' basic . . .

[a] . . . Reading skills?
- [1] None
- [2] About one hour
- [3] Two or three hours
- [4] Four to six hours
- [5] Over six hours

[b] . . . Mathematical skills?
- [1] None
- [2] About one hour
- [3] Two or three hours
- [4] Four to six hours
- [5] Over six hours

18. On the average, about what percentage of your classes' time is spent on each of the following types of activities? **(WRITE IN EACH %. IF NONE, WRITE IN "0". THE TOTAL SHOULD EQUAL 100%.)**

(a) Daily maintenance activities (such as set up, clean up, passing out materials, taking attendance, breaks). ______%
(b) Instruction (lecturing, demonstrating, discussing, etc.) ______%
(c) Student practice of skills (practice problems, projects, laboratory work, etc.) ______%
(d) Other activities (Specify: ____________________________) ______%
TOTAL= 100%

19. During the last year, what percentage of the students in your classes did you formally recognize for their performance (e.g., via certificates, or displaying or reading students' work)? ______%

20. Do you receive student evaluations of your teaching?

[1] Yes ----> How useful are they they in preparing for future courses?

	Not Useful	Somewhat Useful	Moderately Useful	Very Useful
How useful are they they in preparing for future courses?	[1]	[2]	[3]	[4]

[2] No

21. In addition to the hours you are assigned to teach during a typical week, about how many hours outside of class do you spend doing each of the following activities? **(IF UNSURE, GIVE YOUR BEST ESTIMATE.)**

HOURS SPENT:

	0	1-4	5-8	9-12	13-20	Over 20
(a) Official office hours	[1]	[2]	[3]	[4]	[5]	[6]
(b) Completing forms and administrative paperwork	[1]	[2]	[3]	[4]	[5]	[6]
(c) Preparing instructional periods, composing tests, grading papers, etc.	[1]	[2]	[3]	[4]	[5]	[6]
(d) Counseling students - personal problems	[1]	[2]	[3]	[4]	[5]	[6]
(e) Counseling students - career plans	[1]	[2]	[3]	[4]	[5]	[6]
(f) Tutoring and working with students who need special help	[1]	[2]	[3]	[4]	[5]	[6]
(g) Contacting employers on students' behalf and visiting students at worksites	[1]	[2]	[3]	[4]	[5]	[6]
(h) Undertaking research activities in your subject area	[1]	[2]	[3]	[4]	[5]	[6]
(i) Extra-curricular activities (including coaching)	[1]	[2]	[3]	[4]	[5]	[6]
(j) Working - self-employed	[1]	[2]	[3]	[4]	[5]	[6]
(k) Working - employer other than the school (not self-employed)	[1]	[2]	[3]	[4]	[5]	[6]
(l) Background reading in your subject area (e.g., journals, books, periodicals)	[1]	[2]	[3]	[4]	[5]	[6]
(m) Other background reading (e.g., changes in education, equity issues, teaching special students)	[1]	[2]	[3]	[4]	[5]	[6]
(n) Developing alternative activities and materials to better meet the needs of students who required special help (e.g., potential dropouts, handicapped students)	[1]	[2]	[3]	[4]	[5]	[6]
(o) Obtaining additional professional training	[1]	[2]	[3]	[4]	[5]	[6]

22. At this institution, how many class periods have you missed (for any reason) during the past 12 months?

[1] No class periods
[2] One or two class periods
[3] Three or four class periods
[4] Five or more class periods

23. During the past year, how many times has your department head or any other supervisor observed your teaching?

[1] Never
[2] Once
[3] Twice
[4] Three or four times
[5] Five to nine times
[6] Ten or more times

24. On average, how much influence do each of the following factors have on determining faculty salaries?

	A great deal	Somewhat	Only to a minor extent	None (Not app.)
a) Quality of teaching	[1]	[2]	[3]	[4]
b) Professional activities	[1]	[2]	[3]	[4]
c) Service to the community	[1]	[2]	[3]	[4]
d) Collective bargaining agreement	[1]	[2]	[3]	[4]
e) Interactions with employers	[1]	[2]	[3]	[4]
f) Longevity with institution	[1]	[2]	[3]	[4]
g) Full-time or part-time status	[1]	[2]	[3]	[4]
h) Number of courses taught	[1]	[2]	[3]	[4]
i) Educational level	[1]	[2]	[3]	[4]
j) Research activities	[1]	[2]	[3]	[4]

Institution and Students

25. Using the scale provided, please indicate the extent to which you agree or disagree with each of the following statements.

	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
(a) Staff members in this institution don't have much school spirit.	[1]	[2]	[3]	[4]	[5]
(b) The use of drugs or alcohol by students in this institution is well below the national average.	[1]	[2]	[3]	[4]	[5]
(c) Student tardiness and class cutting are very prevalent in this institution	[1]	[2]	[3]	[4]	[5]
(d) The attitudes and habits my students bring to class are not conducive to learning.	[1]	[2]	[3]	[4]	[5]

	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
(e) This institution seems like a big family.	[1]	[2]	[3]	[4]	[5]
(f) There is very little cooperative effort among this school's staff members and students.	[1]	[2]	[3]	[4]	[5]
(g) A very positive "climate" exists in this institution.	[1]	[2]	[3]	[4]	[5]
(h) Staff members in this institution have many opportunities for inservice training and staff development.	[1]	[2]	[3]	[4]	[5]

26. In the classes you teach, about what percentage of the students are . . .

(a) Females? ______%
(b) Males? ______%
} TOTAL = 100%

(c) White? ______%
(d) Black? ______%
(e) Hispanic? ______%
(f) Other minorities? ______%
} TOTAL = 100%

(g) Handicapped? ______%

(h) Limited English Proficient? (LEP/Bilingual) ______%

(i) Economically disadvantaged? ______%

(j) JTPA clients? ______%

(k) Single parents? ______%

(l) Students over age 24 ______%

Program Characteristics

27. (a) Approximately what percentage of the students who enter the occupational program in which you teach leave before they finish?

______% leave the program, but not the school
______% leave the program and the school

(b) Approximately what percentage of students did not intend to complete the program when they enrolled? ______%

28. Are any of your students individuals who had previously left the institution and have returned to school (either on their own or through the auspices of JTPA or some other program)?

[1] No [2] Yes, about ______% of our students

29. Rank the following goals in terms of the emphasis given to them in your occupational program area. Rank the most important goal as "1," the second most important as "2," and so on through "8" for the least important. **(WRITE IN YOUR RANKS. DO NOT DUPLICATE RANKINGS.)**

	Rank
(a) To place students in jobs related to their training when they leave	____
(b) To provide students with the competencies needed to secure jobs (e.g., job search skills, interviewing)	____
(c) To place students in jobs (regardless of their training relatedness) when they leave	____
(d) To enhance students' awareness of the various jobs for which they could prepare	____
(e) To provide opportunities for students to explore various occupational areas	____
(f) To help students develop a strong work ethic (e.g., sense of industriousness and responsibility)	____
(g) To enhance and reinforce students' basic skills (e.g., basic math, reading)	____
(h) To promote access and equity for students	____

30. Generally, do more students apply for entry into the occupational program in which you teach than there are openings in that program?

[1] No
[2] Yes, but only a few more
[3] Yes, up to two times more
[4] Yes, over two times more

31. Use the scale below to indicate the extent to which each of the following sources is used to determine the goals, content, and development of the curriculum of the program in which you teach.

	None				A Great Deal
(a) Your State's plan for vocational education	[1]	[2]	[3]	[4]	[5]
(b) State occupational information coordinating committee	[1]	[2]	[3]	[4]	[5]
(c) State employment service	[1]	[2]	[3]	[4]	[5]
(d) Technical advisory group or committee	[1]	[2]	[3]	[4]	[5]
(e) Surveys of local employers	[1]	[2]	[3]	[4]	[5]

32. Which of the following instructional materials/resources would you use if you were revising, updating, or upgrading the occupational program in which you teach?

(a) State instructional materials laboratory	[1] Yes	[2] No
(b) Curriculum coordination center for your region	[1] Yes	[2] No
(c) Educational publishers (V-TECS, AAVIM, CIMC, NCRVE, etc.)	[1] Yes	[2] No
(d) Commercial publishers (i.e., textbook and workbook publishers, test publishers)	[1] Yes	[2] No
(e) Research and development agencies (e.g., State, RCU, SWRL, NCRVE, etc.)	[1] Yes	[2] No
(f) Local teacher-made materials (your own or someone elses)	[1] Yes	[2] No

33. Which of the following competency-based strategies do you use in the courses that you teach?

(a) Our particular program is not competency-based and we do not use these competency-based strategies [9] (Go to item 34)

	Yes	No
(b) Progress charts	[1]	[2]
(c) Mastery charts	[1]	[2]
(d) Computer recording	[1]	[2]
(e) Standardized written tests	[1]	[2]
(f) Standardized skills performance tests	[1]	[2]
(g) Informal teacher judgments	[1]	[2]
(h) Teacher constructed written tests	[1]	[2]
(i) Teacher constructed skills performance tests	[1]	[2]
(j) Judgments or ratings by employers	[1]	[2]
(k) Other (Specify: ____________________________)	[1]	[2]

34. Do you typically arrange for and supervise cooperative education experiences of students?

[1] No
[2] Yes, typically one student per grading period
[3] Yes, typically two
[4] Yes, three
[5] Yes, four to six
[6] Yes, more than six

35. Are students in your program required to complete a work-study experience or internship in business/industry as part of their training?

[1] No
[2] Yes, up to two weeks
[3] Yes, three to six weeks
[4] Yes, seven to twelve weeks
[5] Yes, thirteen to twenty-four weeks
[6] Yes, over twenty-four weeks

36. Do the employers who supervise the work experiences of cooperative education students influence the grades those students receive?

[1] No, our program is not part of cooperative education
[2] No
[3] Yes, employers recommend grades to the coordinator(s)
[4] Yes, employers assign work experience grades
[5] Yes, employers and coordinators jointly agree and assign students' grades

37. To what extent do representatives of business, industry, and labor influence the following aspects of the program you teach?

	Very Little Influence				Considerable Influence
(a) Determining curriculum goals and objectives	[1]	[2]	[3]	[4]	[5]
(b) Determining curriculum content	[1]	[2]	[3]	[4]	[5]
(c) Assessing relevance and currentness of curriculum	[1]	[2]	[3]	[4]	[5]

	Very Little Influence				Considerable Influence
(d) Recommending programs to be offered or deleted	[1]	[2]	[3]	[4]	[5]
(e) Providing/Developing learning or training sites (e.g., co-op)	[1]	[2]	[3]	[4]	[5]
(f) Identifying changes needed in training due to technological advances	[1]	[2]	[3]	[4]	[5]
(g) Providing equipment and supplies	[1]	[2]	[3]	[4]	[5]
(h) Affirmative action concerns	[1]	[2]	[3]	[4]	[5]

38. During the past three years, have you or others in your program . . .

	No	Yes, Once	Yes, Twice	Yes, Three+ Times
(a) Systematically conducted interviews of employers to determine their satisfaction with employees who were former students in your program?	[1]	[2]	[3]	[4]
(b) Systematically conducted interviews of former students in your program to determine their satisfaction with the training they received?	[1]	[2]	[3]	[4]
(c) Systematically developed learning/training sites (e.g., coop, work-study, career exploration) in your community?	[1]	[2]	[3]	[4]

39. In general, how current and up-to-date are the equipment and materials available in the occupational program in which you teach?

[1] Very current, up-to-date
[2] Current, but not the latest
[3] Somewhat dated, not outmoded
[4] Very dated, outmoded

40. Are individualized teaching/learning activities and experiences an integral part of the occupational program in which you teach?

[1] No
[2] Yes, when dealing with learning basic concepts/theory
[3] Yes, when working in shop/lab on job skill development practice
[4] Yes, all segments of program

41. Are any of the following kinds of special services made available to the students in your program who are having problems?

	Yes	No
(a) Developmental instruction - basic reading	[1]	[2]
(b) Developmental instruction - basic math	[1]	[2]
(c) Pre-tech courses	[1]	[2]
(d) More individualized and intensive counseling and follow-through	[1]	[2]
(e) Special tutorial and/or related types of assistance, (e.g., peer tutoring)	[1]	[2]

Personal Characteristics

42. When were you born? ____________ / ____________
month year

43. What is your sex? [1] Female [2] Male

44. What is your ethnic group? **(Check one)**

- [1] American Indian or Alaskan Native
- [2] Asian American or Pacific Islander
- [3] Black, not of Hispanic origin
- [4] Hispanic
- [5] White, not of Hispanic origin
- [6] Other

45. a) What is the discipline and highest level of education you have completed?

	Discipline(s)
[1] High school diploma	____________
[2] Some college - no certificate	____________
[3] Associate degree	____________
[4] Bachelor's degree	____________
[5] Bachelor's degree plus some graduate work	____________
[6] Master's degree	____________
[7] Master's degree plus additional graduate work	____________
[8] Doctorate	____________

b) Have you received non-school based training in the subject areas you teach (e.g., apprenticeship, on-the-job training)?

[1] Yes. Please explain. ________________________________
____
[2] No ________________________________

46. In what year did you complete your highest level of education as noted in Question 45? ____________
year

47. How many years of experience have you had as a teacher or faculty member on either a part- or full-time basis--

	Years Full-time	Years Part-time
(a) At the elementary or secondary level?	____	____
(b) At two-year community colleges or voc-tech institutions?	____	____
(c) At proprietary schools?	____	____
(d) At four-year colleges or universities?	____	____
(e) Other ________________________________		

EMPLOYMENT HISTORY (Please include instructional and noninstructional positions.)

	48. Current or most recent job	49. Second to last job	50. Third to last job	51. Fourth to last job	52. Fifth to last job
a) Starting Date	________/________ month year	________/________ month year	________/________ month year	________/________ month year	________/________ month year
b) End Date	N/A	________/________ month year	________/________ month year	________/________ month year	________/________ month year
c) Occupation; Job Duties	________________ ________________	________________ ________________	________________ ________________	________________ ________________	________________ ________________
d) Name of institution; Firm	________________ ________________ ________________	________________ ________________ ________________	________________ ________________ ________________	________________ ________________ ________________	________________ ________________ ________________
e) Last (or current) wage or salary	$ ____________ per [1] hour [2] week [3] month [4] year	$ ____________ per [1] hour [2] week [3] month [4] year	$ ____________ per [1] hour [2] week [3] month [4] year	$ ____________ per [1] hour [2] week [3] month [4] year	$ ____________ per [1] hour [2] week [3] month [4] year
f) Supervisory duties (Responsible for performance/salary appraisal for 1 or more individuals)	[1] yes [2] no	[1] yes [2] no	[1] yes [2] no	[1] yes [2] no	[1] yes [2] no
g) Covered by collective bargaining agreement	[1] yes [2] no	[1] yes [2] no	[1] yes [2] no	[1] yes [2] no	[1] yes [2] no

YOU HAVE COMPLETED THE QUESTIONNAIRE. THANK YOU. SIGN THE FOLLOWING CERTIFICATION AND RETURN THE QUESTIONNAIRE TO THE LIAISON LISTED AT THE BOTTOM OF THE 1ST PAGE. YOU WILL RECEIVE A CHECK FOR $10 FROM THE OHIO STATE UNIVERSITY IN 2-3 WEEKS.

I certify that I have completed the Faculty questionnaire for the Postsecondary Occupational Education Delivery: An Examination project.

Signed ______________________________ Date ________________ Social Security No. ______________________

Print ______________________________

Address ______________________________

City ______________________________

State ______________ Zip ____________

STUDENTS

Postsecondary Occupational Education Delivery: An Examination

Conducted by:

The National Center for Research
in Vocational Education
The Ohio State University

Sponsored by:

Office of Vocational
and Adult Education
U.S. Department of
Education

Why we need your help....

Your institution is helping in a national study of postsecondary occupational education. You have been selected as a representative student at your institution to help with that study. Your answers to the questions that follow are very important. They will help provide a basis for describing accurately the occupational education offered in postsecondary institutions and should also provide support for future program improvements.

How you can help....

On the pages that follow you will find a number of questions that relate specifically to yourself and your family, your work experience, and your educational goals and background. These questions can be answered quickly by placing an "X" or a check mark "✓" in the "[3]" next to your answer or by filling in the blank spaces provided. (See the examples shown in the box below.) Please answer all the questions as accurately as possible. Please use a pen to mark your responses.

EXAMPLE 1:

o Nationally, about what percentage of high school students dropout out each year?

[1] Between 4% and 8%
[2] Slightly less than 15%
[✓ [3] About 28%]
[4] Over 50%

EXAMPLE 2:

o About what percentage of the students in your institution are:

(a) Females? 53 **%**
(b) Males? 47 **%**

When you have completed your questionnaire, (a) fold it in half, (b) staple or tape it together, and (c) return it to the institutional liaison whose name is listed below. Again, we want to note that your participation in this study is voluntary. In addition, the information you provide will be treated in the strictest confidence; no data will be associated with the name of an individual or institution in any project-related reports or other form of information dissemination. All data will be aggregated across individuals and institutions and described only at the national level.

INSTITUTIONAL LIAISON

Name: ______________________________
Address: ______________________________

1. Name: ______________________________

2. Institution: ________________________

3. What is (are) your major program(s): ________________________
____

Background

4. When were you born? ____________/________
month year

5. What is your sex?
[1] Female
[2] Male

6. What is your ethnic background?

[1] American Indian or Alaskan Native
[2] Asian American or Pacific Islander
[3] Black, not of Hispanic origin
[4] Hispanic
[5] White, not of Hispanic origin
[6] Other

7. Which of the following best describes the place where you live?

[1] A rural or farming community
[2] A small city of less than 50,000 people that is not a suburb
[3] A medium-sized city (50,000 - 100,000)
[4] A suburb of a medium-sized city
[5] A large city (100,000 - 500,000)
[6] A suburb of a large city
[7] A very large city (over 500,000)
[8] A suburb of a very large city
[9] A military base or station

8. What is your marital status?

[1] Married, spouse present
[2] Married, spouse absent in military or other reasons (not specified)
[3] Widowed
[4] Divorced
[5] Separated
[6] Never married

9. How many children do you have and what are their ages?

[1] None
[2] One ---> Age ______
[3] Two ---> Ages ______ and ______
[4] 3-4 ---> Oldest age ______; youngest ______
[5] 5+ ---> Oldest age ______; youngest ______

10. Do you live independently of your parents (or guardians)?

[1] Yes
[2] No

11. Are you financially independent of your parents (or guardians)?

    [1] Yes
    [2] No

Educational Background

12. What type of school(s) did you attend for grades 1-8 and in high school? **(MARK THE RESPONSE THAT IS TRUE FOR MOST OF THE TIME YOU WERE IN THESE GRADES, IF YOU ATTENDED MORE THAN ONE TYPE.)**

    (a) Elementary and Junior High/ Middle School (Grades 1-8)
      [1] Public
      [2] Private-religious affiliation
      [3] Private-other

    (b) High School (Grades 9-12)
      [1] Public
      [2] Private-religious affiliation
      [3] Private-other

13. When did you graduate from high school or get your GED equivalent?

    ______________/__________
    month year

14. Which of the following best describes your high school program?

    [1] General
    [2] Academic or college prep
    [3] Vocational (Occupational) preparation -->
      [1] Agriculture
      [2] Business/Office
      [3] Distribution/Marketing
      [4] Health
      [5] Home economics
      [6] Technical
      [7] Trade or industrial

15. Which of the following best describes your grades in high school?

    [1] Mostly A (a numerical average of 90-100)
    [2] About half A and half B (85-89)
    [3] Mostly B (80-84)
    [4] About half B and half C (75-79)
    [5] Mostly C (70-74)
    [6] About half C and half D (65-69)
    [7] Mostly D (60-64)
    [8] Mostly below D (below 60)

16. In high school, approximately how much time did you spent on homework per week?

    [1] No homework was ever assigned
    [2] I had homework assigned, but I usually didn't do it
    [3] Less than 1 hour per week
    [4] Between 1 and 3 hours per week
    [5] 3-5 hours per week (1/2 - 1 hour per night)
    [6] 5-10 hours per week (1 - 2 hours per night)
    [7] 11-15 hours per week (2 - 3 hours per night)
    [8] 15+ hours

17. In high school, did you participate in any of the following type of activities in or out of school? **(ANSWER ALL ITEMS)**

	Did not participate	Participated actively, but not as officer or leader	Officer or leader
(a) Varsity athletic teams	[1]	[2]	[3]
(b) Other athletic teams	[1]	[2]	[3]
(c) Cheer leading, pep club, majorettes	[1]	[2]	[3]
(d) Drama	[1]	[2]	[3]
(e) Band, orchestra, chorus, or dance	[1]	[2]	[3]
(f) Hobby clubs (photography, electronics, crafts) or school subject clubs (science, business, math)	[1]	[2]	[3]
(g) Honorary clubs, such as National Honor Society	[1]	[2]	[3]
(h) School newspaper, magazine, yearbook	[1]	[2]	[3]
(i) Student council, student government, political club	[1]	[2]	[3]
(j) Vocational education clubs (FHA, FTA, FFA, DECA, FBLA, VICA)	[1]	[2]	[3]
(k) Youth organizations in the community (Scouts, Y) or church activities	[1]	[2]	[3]
(l) Junior Achievement	[1]	[2]	[3]

18. Have you taken any of the following tests?

a) College Board SAT test [1] Yes ----> Combined score:
[2] No
[1] 400 - 600
[2] 600 - 800
[3] 800 - 1000
[4] 1000 - 1200
[5] 1200+

b) ACT test [1] Yes ----> Score:
[2] No
[1] less than 15
[2] 15 - 19
[3] 20 - 24
[4] 25 - 30
[5] More than 30

Current Education

19. For how many grading periods (quarters, semesters, etc.) have you attended this institution not counting this current one? _______

20. Please rank the four most important factors that influenced you to choose this institution. **(The most important factor would be 1, the next most important 2, and so forth. Do not repeat rankings. If there are fewer than 4 factors, then only rank the factors that were important.)**

(a) Guidance counselor in prior school	______
(b) Catalog's description	______
(c) Parents advice	______
(d) Teacher in prior school	______
(e) Location	______
(f) Friend or acquaintance recommendation	______
(g) Reputation of the institution for providing high quality education and training	______
(h) Reputation of the institution for high placement rates	______
(i) Cost considerations	______
(j) Financial aid	______
(k) It is the only institution in my state that offers the program I'm interested in	______

21. Does this institution consider you a full or a part-time student?

[1] Full time
[2] Part-time
[3] Don't know

22. How many credit hours are you enrolled in during this grading period?
__________ credit hours

23. How many credit hours are you planning to enroll in for the entire year? (September 1, 1986 - August 31, 1987) __________ credit hours

24. a) What is the cost per credit hour for the courses you are currently taking? $__________._____

b) What is the total cost for course fees over and above the charges per credit hour? $__________._____

25. Did you receive a loan to cover any of the costs for this year's educational expenses?

[1] Yes
[2] No

26. Did you receive any form of financial aid for this school year such as a scholarship, grant, fellowship, assistantship, tuition waiver, or veteran's educational benefits? **(MARK ALL THAT APPLY)**

[9] No (Go to Question 27)

[1] Yes, a scholarship
[2] Yes, a grant
[3] Yes, a fellowship
[4] Yes, an assistantship
[5] Yes, a tuition waiver
[6] Yes, veterans' benefits
[7] Yes, JTPA/PIC
[8] Yes, other (specify: _______________)

27. Have you taken any of the following courses at this institution? **(ANSWER ALL ITEMS)**

	Yes	No
a) Basic English (sometimes called developmental or essential)	[1]	[2]
b) Basic Mathematics (sometimes called developmental or essential)	[1]	[2]
c) A course on how to study	[1]	[2]
d) Basic science (sometimes called pre-tech)	[1]	[2]
e) Career education (job knowledge, job seeking skills, career awareness	[1]	[2]

28. Which of the following best describes your grades in this institution?

[1] Mostly A (a numerical average of 90-100)
[2] About half A and half B (85-89)
[3] Mostly B (80-84)
[4] About half B and half C (75-79)

[5] Mostly C (70-74)
[6] About half C and half D (65-69)
[7] Mostly D (60-64)
[8] Mostly below D (below 60)

29. About how much time do you spend preparing for ________________ (course name) each week? ________ hours

30. Is the time that you spend on this course more, less, or about the same as time spent on your other courses?

[1] More
[2] About the same
[3] Less
[4] Don't know

31. What type of degree are you currently working toward and what is the highest type of degree you eventually plan to get?

Working on	Plan to get
[1] Vocational certificate	[1] Vocational certificate
[2] Associate's degree	[2] Associate's degree
[3] Bachelor's degree	[3] Bachelor's degree
[4] Other (Please specify: ____________________)	[4] Master's degree
[5] Not working toward a degree	[5] Ph.D.
	[6] Other: (____________________)
	[7] Not working toward a degree

32. Do you participate in any of the following types of activities in or out of school? **(ANSWER ALL ITEMS)**

	Do not participate	Participate actively, but not as officer or leader	Officer or leader
a) Varsity athletic teams	[1]	[2]	[3]
b) Other athletic teams	[1]	[2]	[3]
c) Cheerleading, pep club, majorettes	[1]	[2]	[3]
d) Drama	[1]	[2]	[3]
e) Band, orchestra, chorus, or dance	[1]	[2]	[3]
f) Hobby clubs (photography, electronics, crafts)	[1]	[2]	[3]
g) Honorary clubs or societies	[1]	[2]	[3]
h) School newspaper, magazine, yearbook	[1]	[2]	[3]
i) Student government	[1]	[2]	[3]

33. Do you participate in an internship or cooperative education program that involves employment off-campus?

[1] Yes

[2] No (Go to question 35)

How many hours per week do you work as part of the program? ____ hours

34. Do you receive credit toward a degree for co-op work?

[1] Yes

[2] No

35. An individualized course is one that you take on your own at your own speed, perhaps with assistance of a microcomputer. How many individualized courses have you taken in this institution?

________ courses

[99] None

36. Do you agree or disagree with the following statements?

	Strongly Disagree	Moderately Disagree	Moderately Agree	Strongly Agree
a) The course work in this institution is more difficult than high school.	[1]	[2]	[3]	[4]
b) On average, the instructors seem to care a lot about students.	[1]	[2]	[3]	[4]
c) The students here have a lot of school spirit.	[1]	[2]	[3]	[4]
d) I had no idea about how hard the courses would be when I entered.	[1]	[2]	[3]	[4]
e) The library facilities at this institution are good.	[1]	[2]	[3]	[4]
f) The equipment at this institution is good.	[1]	[2]	[3]	[4]
g) This institution does not place as many students in jobs after graduation as they advertise.	[1]	[2]	[3]	[4]

37. Do you feel that you will complete the program that you are in?

[1] Yes ---> (Go to question 38)
No, because **(Mark the best answer)**
[2] I will probably transfer to another program in this institution
[3] I will probably transfer to another institution
[4] I will probably stop attending because the work is too hard
[5] I will probably stop attending for financial reasons
[6] I will probably stop attending because English is a second language and I am having too much difficulty
[7] I will probably get a job after I complete the program
[8] I will probably stop attending for other reasons
(Specify: ________________________________)

Other Colleges

38. Have you attended any college or institution after high school prior to or while you were enrolled here?

[1] Yes
[2] No (Go to question 44)

39. What was the name and address of the most recent postsecondary institution you attended?

____
____
____

40. Dates of attendance of most recent enrollment prior to this institution?

From _______/_________ to _______/_________
month year month year

41. What was/is your major at that institution? ____________________________
[99] Undecided, no major

42. Did you receive a degree? [1] Yes
[2] No (Go to question 44)

43. Which degree?
[1] Vocational certificate
[2] Associate degree
[3] Bachelor's degree
[4] Master's degree
[5] Ph.D.
[6] Other: ________________

Military

44. Have you served or are you currently serving in the Armed Forces, including the National Guard or Reserves?
[1] Yes
[2] No (Go to question 49)

45. What were the dates of your service? From _______/_________ to
month year
_______/ ________. **(Enter current date if still serving.)**
month year

46. (a) What is the name of the job you were trained for?

____

(b) What were/are the main activities and duties?

____

47. How many weeks of training (not counting basic) did you complete?

Formal School Training	On the Job Training
___ ___ weeks	___ ___ weeks
[99] None	[99] None

48. How related was your training to the course of study you are now pursuing?

[1] Not at all related
[2] Somewhat related
[3] Related
[4] Very related

Employment History

49. Are you currently employed for pay?
[1] Yes
[2] No (Go to question 59)

50. When did you start working at this job? ____________/__________
month year

51. What is your occupation/job duties?

____

52. Name of employer: ________________________________
Type of industry: ________________________________

53. How many hours did you work last week? _________ hours

54. What is you hourly wage or salary? $_________ per [1] hour [2] week [3] month [4] year
(Include tips, bonuses, commission)

55. How related is your job to the course of study you are pursuing?

[1] Not at all related
[2] Somewhat related
[3] Related
[4] Very related

56. How did you find out about this job?

[1] Responded to an ad in the newspaper
Referred by:
[2] Friend or family member
[3] State employment agency
[4] High school teacher or counselor
[5] College/institution staff member
[6] Listed in placement office
[7] Other: ____________

57. Does your employer know that you are attending school?
[1] Yes
[2] No (Go to item 59)

58. Does your employer typically allow you to adjust your work schedule, hours, or duties to accomodate your school work or schedule?
[1] Yes
[2] No

5 MOST RECENT PRIOR JOBS

	a) Recruitment Source	b) Starting Date	c) Ending Date	d) Occupation or Job Duties	e) Name of Firm	f) Average Hours/Week	g) Relevant Current Training	h) Last (or current wage or salary)
59. Most recent job (not including job described in question 49)	[1] Newspaper ad [2] School placement office [3] State employment office [4] Friend/ acquaintance [5] Teacher/ Counselor [6] Other	______/_____	______/_____	______________ ______________ ______________	______________	During school _____ Summers _____	[1] Yes [2] No	$________ per [1] hour [2] week [3] month [4] year
60. Second most recent job	[1] Newspaper ad [2] School placement office [3] State employment office [4] Friend/ acquaintance [5] Teacher/ Counselor [6] Other	______/_____	______/_____	______________ ______________ ______________	______________	During school _____ Summers _____	[1] Yes [2] No	$________ per [1] hour [2] week [3] month [4] year
61. Third most recent job	[1] Newspaper ad [2] School placement office [3] State employment office [4] Friend/ acquaintance [5] Teacher/ Counselor [6] Other	______/_____	______/_____	______________ ______________ ______________	______________	During school _____ Summers _____	[1] Yes [2] No	$________ per [1] hour [2] week [3] month [4] year
62. Fourth most recent job	[1] Newspaper ad [2] School placement office [3] State employment office [4] Friend/ acquaintance [5] Teacher/ Counselor [6] Other	______/_____	______/_____	______________ ______________ ______________	______________	During school _____ Summers _____	[1] Yes [2] No	$________ per [1] hour [2] week [3] month [4] year
63. Fifth most recent job	[1] Newspaper ad [2] School placement office [3] State employment office [4] Friend/ acquaintance [5] Teacher/ Counselor [6] Other	______/_____	______/_____	______________ ______________	______________	During school _____ Summers _____		$________ per [1] hour [2] week [3] month [4] year

Government-Sponsored Training

64. Besides the jobs you just listed (or earlier jobs), have you received skill training from a government-sponsored program such as CETA, JTPA, or the Job Corps, from a labor organization, or from a community-based organization such as the Urban League, an action agency, etc. **(MARK ALL THAT APPLY)**

[1] No (Go to question 67)
[2] Yes, from CETA or JTPA
[3] Yes, from a labor organization
[4] Yes, from a community-based organization

65. What is/are the name(s) of the agencies that sponsored this training?

____
____

66. For the program that you attended last (most recently)--

a) Did you complete the program?
[1] Yes
[2] No, I am still enrolled
[3] No

b) Dates of enrollment From ________/______ to ________/______
month year month year

c) What occupation or job were you being trained for? ________________

d) Did this program provide you classroom or individualized instruction in reading, writing, or arithmetic?
[1] Yes
[2] No

e) How related was the training to the program or course of study you are currently pursuing?

[1] Not at all related
[2] Somewhat related
[3] Related
[4] Very related

67. Do you have any of the following conditions? **(MARK ALL THAT APPLY)**

[1] Specific learning disability
[2] Visual handicap (not correctable)
[3] Hard of hearing
[4] Deafness
[5] Speech disability
[6] Orthopedic handicap
[7] Other physical disability or handicap
Please describe:________
____
[8] None of these conditions

68. Families may be divided into 8 groups according to how much income they receive in a year. **(MARK THE INCOME RANGE THAT APPLIES TO YOUR FAMILY.)**

[1] $7999 or less
[2] $8000 - 11,999
[3] $12,000 - 15,999
[4] $16,000 - 19,999
[5] $20,000 - 24,999
[6] $25,000 - 34,999
[7] $35,000 - 49,999
[8] $50,000+

APPENDIX D

ITEM NONRESPONSE TABLES

EXHIBIT D-1

ITEM NONRESPONSE FOR THE ADMINISTRATIVE OFFICIAL SURVEY

Item	Nonresponses	Nonresponse Rate
Administrator's Title	2	0.5%
2. a)	21	5.6
b)	-	-
c)	-	-
d)	-	-
e)	-	-
3. a)	11	2.9
b)	13	3.4
c)	9	2.4
d)	11	2.9
e)	17	4.5
f)	18	4.8
g)	8	2.1
h)	10	2.7
4. a) (i)	29	7.7
(ii)	13	3.4
(iii)	28	7.4
(iv)	30	8.0
b) (i)	27	7.2
(ii)	13	3.4
(iii)	32	8.5
(iv)	36	9.5
c) (i)	31	8.2
(ii)	15	4.0
(iii)	34	9.0
(iv)	40	10.6
d) (i)	20	5.3
(ii)	15	4.0
(iii)	29	7.7
(iv)	38	10.1
e) (i)	27	7.2
(ii)	20	5.3
(iii)	37	9.8
(iv)	44	11.7
f) (i)	32	8.5
(ii)	24	6.4
(iii)	43	11.4
(iv)	44	11.7
g) (i)	27	7.2
(ii)	25	6.6
(iii)	39	10.3
(iv)	39	10.3

EXHIBIT D-1--Continued

Item	Nonresponses	Nonresponse Rate
h) (i)	19	5.0
(ii)	21	5.6
(iii)	36	9.5
(iv)	36	9.5
i) (i)	25	6.6
(ii)	23	6.1
(iii)	39	10.3
(iv)	40	10.6
j) (i)	17	4.5
(ii)	16	4.2
(iii)	34	9.0
(iv)	37	9.8
5. a)	13	3.4
b) (i)	-	-
(ii)	-	-
6. a)	7	1.9
b)	7	1.9
c)	8	2.1
d)	8	2.1
e)	19	5.0
f)	8	2.1
g)	7	1.9
h)	14	3.7
i)	6	1.6
j)	8	2.1
7. a)	9	2.4
b)	-	-
c)	-	-
8. a)	7	1.9
b)	6	1.6
c)	6	1.6
d)	6	1.6
e)	9	2.4
f)	7	1.9
g)	6	1.6
h)	6	1.6
9. a)	7	1.9
b)	5	1.3
c)	6	1.6
d)	5	1.3
e)	6	1.6
f)	7	1.9
g)	11	2.9
h)	8	2.1
i)	14	3.7
j)	6	1.6
k)	6	1.6
l)	8	2.1
m)	9	2.4

EXHIBIT D-1--Continued

Item	Nonresponses	Nonresponse Rate
n)	7	1.9
o)	8	2.1
p)	7	1.9
q)	14	3.7
r)	8	2.1
s)	13	3.4
t)	7	1.9
10. a)	8	2.1
b)	9	2.4
c)	7	1.9
d)	4	1.1
e)	3	0.8
f)	8	2.1
g)	43	11.4
h)	8	2.1
i)	13	3.4
j)	11	2.9
k)	15	4.0
l)	18	4.8
11. a)	10	2.7
b)	17	4.5
12. a)	10	2.7
b)	13	3.4
c)	11	2.9
d)	12	3.2
e)	11	2.9
f)	8	2.1
g)	12	3.2
13. a)	13	3.4
b)	10	2.7
c)	24	6.4
d)	19	5.0
e)	12	3.2
f)	17	4.5
g)	19	5.0
14.	18	4.8
[1] Description	18	4.8
15.	-	-
16.	-	-
17. a)	13	3.4
b)	19	5.0
c)	12	3.2
d)	22	5.8
e)	19	5.0
f)	-	-
18.	15	4.0
[1] Description	22	5.8
19.	13	3.4
20.	18	4.8

EXHIBIT D-1--Continued

Item		Nonresponses	Nonresponse Rate
21.	a)	38	10.1
	b)	53	14.1
	c)	47	12.5
	d)	53	14.1
	e)	55	14.6
	f)	54	14.3
	g)	-	-
	g) Description	-	-
22.	a)	66	17.5
	b)	71	18.8
	c)	22	5.8
	d)	47	12.5
	e)	54	14.3
	f)	37	9.8
	g)	-	-
	h)	-	-
	i)	33	8.8
23.		19	5.0
24.		10	2.7
25.		12	3.2
26.		15*	4.0*
27.		21	5.6
28.	a)	-	-
	b)	-	-
	c)	-	-
	d)	-	-
	e)	-	-
29.	a)	43	11.4
	c)	48	12.7
	d)	48	12.7
	e)	102	27.1
	f)	50	13.3
	g)	52	13.8
30.	a)	41*	10.9*
	b)	42*	11.1*
	c)	43*	11.4*
	d)	44*	11.7*
	e)	106*	28.1*
	f)	47*	12.5*
	g)	50*	13.3*
31.	a)	33*	8.8*
	b)	34*	9.0*
	c)	35*	9.3*
	d)	34*	9.0*
	e)	102*	27.1*
	f)	40*	10.6*
	g)	40*	10.6*

EXHIBIT D-1--Continued

Item	Nonresponses	Nonresponse Rate
32. a)	26*	6.9*
b)	28*	7.4*
c)	27*	7.2*
d)	25*	6.6*
e)	73*	19.4*
f)	44*	11.7*
g)	32*	8.5*

NOTE: * = estimated number
– could not determine or estimate

EXHIBIT D-2

ITEM NONRESPONSE FOR THE ADMINISTRATIVE OFFICIAL SURVEY SUPPLEMENT

Item	Nonresponses	Nonresponse Rate
Title	46	13.5%
S1.	6	1.8
S2.	20	5.8
S3. a)	24*	7.0*
b)	24*	7.0*
c)	24*	7.0*
d)	24*	7.0*
e)	24	7.0
f)	24*	7.0*
S4.	75	21.9
S5. a)	75	21.9
b)	75*	21.9*
S6. a)	5	1.5
b)	10	2.9
c)	-	-
d)	-	-
e)	135	39.5
f)	64	18.7
g)	-	-
S7.	23	6.7
S8. a)	50*	14.6*
b)	50*	14.6*
c)	50*	14.6*
d)	50*	14.6*
S9. a)	-	-
b)	-	-
S10.	118	34.5
S11. a)	-	-
b)	-	-
S12. a)	32	9.4
b)	50*	14.6*
c)	47	13.7
S13. a)	-	-
b)	-	-
S14. a)	-	-
a) (1)	-	-
a) (2)	-	-
b)	-	-
c)	-	-

EXHIBIT D-2--Continued

Item	Nonresponses	Nonresponse Rate
S15. a)	-	-
b)	-	-
c)	-	-
d)	-	-
e)	-	-
f)	-	-
g)	-	-
h)	-	-

NOTE: * = estimated number
- could not determine or estimate

EXHIBIT D-3

ITEM NONRESPONSE FOR THE PLACEMENT DIRECTOR SURVEY

Item	Nonresponses	Nonresponse Rate
Title	6	1.6%
1. a)	26	7.1
b)	20	5.4
c)	15	4.1
d)	15	4.1
e)	34	9.3
f)	34	9.3
2.	1	0.3
3.	3	0.8
4.	22	6.0
5. a)	-	-
b)	-	-
c)	-	-
6.	21	5.7
7. a)	15	4.1
b)	10	2.7
c)	12	3.3
d)	10	2.7
e)	10	2.7
f)	9	2.5
g)	11	3.0
h)	11	3.0
i)	9	2.5
j)	7	1.9
k)	8	2.2
l)	12	3.3
8.	14	3.8
9. a)	3	0.8
b)	3	0.8
c)	3	0.8
d)	3	0.8
e)	3	0.8
f)	3	0.8
g)	-	-
h)	4	1.1
10. a)	9	2.5
b)	-	-
11.	0	0.0
12.	8	2.2
13.	-	-
14.	47	12.8
15.	11	3.0
16.	6	1.6
17.	8	2.2
18.	8	2.2
19.	11	3.0

EXHIBIT D-3--Continued

Item	Nonresponses	Nonresponse Rate
[2] description	15	4.1
20.	17	4.6
21.	9	2.5
22.	13	3.5

NOTE: * = estimated number
- could not determine or estimate

EXHIBIT D-4

ITEM NONRESPONSE FOR THE CHAIRPERSON SURVEY

Item		Nonresponses	Nonresponse Rate
4.		70	11.6%
5.	a)	20	3.3
	b)	20*	3.3*
6.	a)	155	25.6
	b)	-	-
	c)	-	-
7.	a)	11	1.8
	b)	15	2.5
	c)	15	2.5
	d)	-	-
	e)	-	-
8.		6	1.0
9.		63	10.4
10.		-	-
11.		50*	8.3*
12.	a)	20	3.3
	b)	11	1.8
	c)	12	2.0
	d)	15	2.5
	e)	15	2.5
	f)	12	2.0
	g)	27	4.5
	h)	17	2.8
	i)	56	9.3
	j)	17	2.8
	k)	12	2.0
	l)	15	2.5
	m)	11	1.8
	n)	11	1.8
	o)	15	2.5
	p)	18	3.0
	q)	15	2.5
	r)	15	2.5
	s)	48	7.9
	t)	14	2.3
13.		19	3.1
14.		8	1.3
15.		63	10.4
16.		9	1.5
17.		-	-
18.	a)	36	6.0
	b)	38	6.3
	c)	43	7.1
	d)	34	5.6
	e)	49	8.1
	f)	28	4.6

EXHIBIT D-4--Continued

Item	Nonresponses	Nonresponse Rate
g)	32	5.3
h)	42	6.9
i)	25	4.1
j)	51	8.4
19. a)	-	-
b)	-	-
20.	16	2.6
[1] description	27	4.5
21.	-	-
22. a)	71	11.7
b)	80	13.2
23. a)	11	1.8
b)	8	1.3
c)	8	1.3
d)	9	1.5
e)	8	1.3
f)	11	1.8
g)	11	1.8
h)	13	2.1
24. a)	19	3.1
b)	26	4.3
c)	20	3.3
d)	22	3.6
e)	22	3.6
f)	19	3.1
g)	50	8.3
h)	25	4.1
i)	27	4.5
j)	22	3.6
k)	32	5.3
l)	32	5.3
25.	4	0.7
26.	30	5.0
27. gender)	69	11.4
race)	49	8.1
g)	-	-
h)	-	-
i)	-	-
j)	-	-
k)	-	-
28. a)	-	-
b)	-	-
c)	-	-
d)	-	-
e)	-	-

EXHIBIT D-4--Continued

Item	Nonresponses	Nonresponse Rate
29. a)	37	6.1
b)	42	6.9
c)	32	5.3
d)	41	6.8
e)	28	4.6
f)	41	6.8
g)	44	7.3
h)	34	5.6
30.	124	20.5
31.	118	19.5
32. a)	23	3.8
b)	30	5.0
c)	27	4.5
d)	33	5.5
e)	25	4.1
f)	29	4.8
33. a)	46	7.6
b)	46	7.6
c)	46	7.6
d)	49	8.1
e)	57	9.4
f)	55	9.1
g)	53	8.8
h)	56	9.3
i)	53	8.8
j)	60	9.9
k)	70	11.6
l)	46	7.6
m)	54	8.9
n)	56	9.3
o)	57	9.4
34.	26	4.4
35.	12	2.0
36.	14	2.3
37.	-	-
38.	41	6.8
39.	-	-
40. a)	46	7.6
c)	46	7.6
d)	47	7.8
e)	114	18.8
f)	63	10.4
g)	77	12.7

EXHIBIT D-4--Continued

Item	Nonresponses	Nonresponse Rate
41. a)	44*	7.3*
b)	55*	9.1*
c)	52*	8.6*
d)	50*	8.3*
e)	144*	23.8*
f)	72*	11.9*
g)	86*	14.2*
42. a)	53*	8.8*
b)	56*	9.3*
c)	53*	8.8*
d)	53*	8.8*
e)	130*	21.5*
f)	76*	12.6*
g)	85*	14.0*
43. a)	72*	11.9*
b)	74*	12.2*
c)	69*	11.4*
d)	68*	11.2*
e)	122*	20.2*
f)	79*	13.1*
g)	82*	13.6*

NOTE: * = estimated number
- could not determine or estimate

EXHIBIT D-5

ITEM NONRESPONSE FOR THE FACULTY SURVEY

Item	Nonresponses	Nonresponse Rate
4.	69	5.6%
5.	23	1.9
6.	15	1.2
7. a)	69	5.6
b)	213	17.2
8. a)	8	0.6
[1] description	12	1.0
9.	74	6.0
10. a)	6	0.5
b)	4	0.3
c)	3	0.2
d)	4	0.3
11. a)	26	2.1
b)	49	4.0
c)	35	2.8
d)	34	2.7
e)	40	3.2
f)	26	2.1
12. a)	16	1.3
b)	22	1.8
c)	18	1.5
d)	25	2.0
e)	14	1.1
f)	27	2.2
g)	16	1.3
13. a)	13	1.0
b)	10	0.8
c)	7	0.6
d)	6	0.5
e)	7	0.6
14. weeks	55	4.4
a)	35	2.8
b)	80	6.5
15.	100	8.1
16.	7	0.6
17. a)	18	1.5
b)	36	2.9
18.	10	0.8
19.	-	-
20. a)	8	0.6
b)	0	0.0
21. a)	16	1.3
b)	25	2.0
c)	9	0.7
d)	10	0.8

EXHIBIT D-5--Continued

Item	Nonresponses	Nonresponse Rate
e)	7	0.6
f)	21	1.7
g)	11	0.9
h)	17	1.4
i)	21	1.7
j)	33	2.7
k)	61	4.9
l)	5	0.4
m)	18	1.5
n)	10	0.8
o)	16	1.3
22.	4	0.3
23.	15	1.2
24. a)	50	4.0
b)	56	4.5
c)	60	4.8
d)	57	4.6
e)	79	6.4
f)	61	4.9
g)	42	3.4
h)	54	4.4
i)	39	3.1
j)	56	4.5
25. a)	7	0.6
b)	10	0.8
c)	5	0.4
d)	4	0.3
e)	6	0.5
f)	8	0.6
g)	6	0.5
h)	7	0.6
26. gender	-	-
race	28	2.3
g)	-	-
h)	-	-
i)	-	-
j)	-	-
k)	-	-
l)	-	-
27. a)	-	-
b)	-	-
28.	165	13.3
[2] percentage	13	1.0
29. a)	47	3.8
b)	40	3.2
c)	57	4.6
d)	49	4.0
e)	49	4.0

EXHIBIT D-5--Continued

Item		Nonresponses	Nonresponse Rate
	f)	42	3.4
	g)	49	4.0
	h)	64	5.2
30.		37	3.0
31.	a)	66	5.3
	b)	78	6.3
	c)	84	6.8
	d)	66	5.3
	e)	70	5.6
32.	a)	61	4.9
	b)	71	5.7
	c)	73	5.9
	d)	43	3.5
	e)	68	5.5
	f)	40	3.2
33.		--	-
34.		22	1.8
35.		15	1.2
36.		81	6.5
37.	a)	28	2.3
	b)	30	2.4
	c)	31	2.5
	d)	36	2.9
	e)	50	4.0
	f)	39	3.1
	g)	41	3.3
	h)	54	4.4
38.	a)	55	4.4
	b)	56	4.5
	c)	58	4.7
39.		15	1.2
40.		24	1.9
41.	a)	33	2.7
	b)	34	2.7
	c)	80	6.5
	d)	54	4.4
	e)	34	2.7
42.		18	1.5
43.		5	0.4
44.		14	1.1
45.	a)	8	0.6
	b)	22	1.8
46.		37	3.0
47.		--	--
48.	a)	56	4.5
	c)	90	7.3
	d)	93	7.5
	e)	150	12.1

EXHIBIT D-5--Continued

Item	Nonresponses	Nonresponse Rate
f)	121	9.8
g)	128	10.3
49. a)	71*	5.7*
b)	150*	12.1*
c)	122*	9.8*
d)	141*	11.4*
e)	244*	19.7*
f)	210*	16.9*
g)	186*	15.0*
50. a)	72*	5.8*
b)	87*	7.0*
c)	122*	9.8*
d)	132*	10.7*
e)	227*	18.3*
f)	214*	17.3*
g)	192*	15.5*
51. a)	99*	8.0*
b)	102*	8.2*
c)	131*	10.6*
d)	125*	10.1*
e)	221*	17.8*
f)	205*	16.5*
g)	180*	14.5*
52. a)	128*	10.3*
b)	128*	10.3*
c)	140*	11.3*
d)	141*	11.4*
e)	205*	16.5*
f)	174*	14.0*
g)	156*	12.6*

NOTE: * = estimated number
- could not determine or estimate

EXHIBIT D-6

ITEM NONRESPONSE FOR THE STUDENT SURVEY

Item	Nonresponses	Nonresponse Rate
3.	129	3.9%
4.	22	0.7
5.	21	0.6
6.	22	0.7
7.	38	1.1
8.	7	0.2
9.	34	1.0
10.	16	0.5
11.	24	0.7
12. a)	61	1.8
b)	116	3.5
13.	94	2.8
14.	36	1.1
[3] response	5	0.2
15.	29	0.9
16.	27	0.8
17. a)	220	6.6
b)	302	9.1
c)	372	11.2
d)	400	12.0
e)	377	11.3
f)	361	10.8
g)	376	11.3
h)	342	10.3
i)	373	11.2
j)	300	9.0
k)	275	8.3
l)	404	12.1
18. a)	214	6.4
[1] response	249	7.5
b)	279	8.4
[1] response	235	7.1
19.	-	-
20.	-	-
21.	66	2.0
22.	603	18.1
23.	793	23.8
24. a)	-	-
b)	-	-
25.	70	2.1
26.	-	-
27. a)	182	5.5
b)	186	5.6
c)	331	9.9

EXHIBIT D-6--Continued

Item	Nonresponses	Nonresponse Rate
d)	350	10.5
e)	241	7.2
28.	87	2.6
29.	176	5.3
30.	149	4.5
31. a)	136	4.1
b)	419	12.6
32. a)	162	4.9
b)	154	4.6
c)	206	6.2
d)	207	6.2
e)	211	6.3
f)	205	6.2
g)	182	5.5
h)	205	6.2
i)	207	6.2
33.	70	2.1
[1] hours	51	1.5
34.	-	-
35.	-	-
36. a)	87	2.6
b)	54	1.6
c)	100	3.0
d)	70	2.1
e)	144	4.3
f)	77	2.3
g)	330	9.9
37.	33	1.0
38.	45	1.4
39.	2	0.1
40.	39	1.2
41.	159	4.8
42.	-	-
43.	-	-
44.	62	1.9
45.	4	0.1
46.	11	0.3
47. a)	-	-
b)	-	-
48.	-	-
49.	40	1.2
50.	0	0.0
51.	2	0.1
52.	4	0.1
53.	49	1.5
54.	56	1.7
55.	-	-

EXHIBIT D-6--Continued

Item	Nonresponses	Nonresponse Rate
56.	2	0.1
[7] description	17	0.5
57.	0	0.0
58.	62	1.9
59. a)	290*	8.7*
b)	45*	1.4*
c)	148*	4.4*
d)	14*	0.4*
e)	27*	0.8*
f)	-	-
g)	253*	7.6*
h)	156*	4.7*
60. a)	379*	11.4*
b)	62*	1.9*
c)	81*	2.4*
d)	20*	0.6*
e)	39*	1.2*
f)	-	-
g)	269*	8.1*
h)	146*	4.4*
61. a)	478*	14.4*
b)	80*	2.4*
c)	81*	2.4*
d)	54*	1.6*
e)	67*	2.0*
f)	-	-
g)	297*	8.9*
h)	174*	5.2*
62. a)	389*	11.7*
b)	119*	3.6*
c)	121*	3.6*
d)	109*	3.3*
e)	114*	3.4*
f)	-	-
g)	287*	8.6*
h)	177*	5.3*
63. a)	337*	10.1*
b)	149*	4.5*
c)	152*	4.6*
d)	143*	4.3*
e)	149*	4.5*
f)	-	-
g)	563*	16.9*
h)	187*	5.6*
64.	94	2.8
65.	129	3.9
66. a)	67	2.0
b)	111	3.3

EXHIBIT D-6--Continued

Item	Nonresponses	Nonresponse Rate
c)	120	3.6
d)	85	2.6
e)	98	2.9
67.	149	4.5
68.	162	4.9
Locating Info	175	5.3

NOTE: * = estimated number
- could not determine or estimate

APPENDIX E

ON SITE VISIT INTERVIEW FORMS AND CLASSROOM OBSERVATION FORM

Postsecondary Occupational Education Delivery: An Examination

ADMINISTRATIVE OFFICIAL INTERVIEW FORM

INTERVIEWER ____________________

INSTITUTION ____________________

DATE ____________________

ADMINISTRATIVE OFFICIAL ____________________

TITLE ____________________
____

TIME: Start ____________________
End ____________________

ADMINISTRATIVE STRUCTURE

1. Would you please describe the organizational structure of your administration? (Request organizational chart.)

CURRICULUM DECISION MAKING

2. If you received a suggestion for a change to a particular curriculum or establishment of a new program, please describe the steps that would have to be followed to implement such a change. (PROBE: faculty, department chair, committees, students, business involvement, accreditation agencies) About how long would it take?

3. How often are programs/departments evaluated? How? By whom? Can you give me an example of an improvement resulting from a program evaluation?

4. Can you think of cases when inadequate or shrinking resources affected instructional delivery or course offerings? How does your institution make choices about such matters?

LINKAGES WITH BUSINESS/ECONOMIC DEVELOPMENT

5. How much interaction do your administrative staff and faculty have with the business/industry/labor community? Do you formally encourage such interaction? If so, is it a factor in evaluation or salary determinations?

6. Does your institution have any customized training programs established with local businesses? Does it have any JTPA training linkages? Dislocated worker programs? Penal institution programs? Military training?

7. How does your institution contribute to the economic development of your community/region? Do you think there are additional activities or ways you could be contributing to economic development? How?

DEVELOPMENTAL PROGRAMS/AT RISK
STUDENTS

8. How does your institution support at-risk students such as ESL, handicapped, economically disadvantaged? How does it help students with limited basic skills attainment?

9. How effective are these programs? (PROBE: What evidence?)

STAYING CURRENT

Often mentioned by educational CEO's as perhaps their hardest problem to confront is keeping faculty and facilities current and up to date.

10. How does your institution support the professional development of faculty? (In their own fields as well as in instructional delivery). What are you doing to upgrade yourself as an administrator? Is this a job requirement?

11. How does your institution budget and make decisions about equipment investments? How does it set priorities?

12. What percentage of your budget is devoted to staff development? To facilities improvement?

LEADERSHIP

13. What leadership traits and attitudes do you see as most important in your job? Do you consider yourself task oriented or people oriented? Do you feel that you set the course for your institution or manage the day-to-day affairs?

INNOVATION

Another important objective of our study is to discover and publicize innovative programs or practices that seem to be successful. Innovation can occur in instruction, curriculum, articulation, administrative support, or management practices.

14. What innovative programs or practices are being undertaken at your institution that you are most proud of and what effects are they having? (Limit to 2 or 3).

15. Is your institution tightening admission, grading, or hiring standards or doing anything else in response to the general movement toward excellence in education? (Probe: Value added program, departmental incentives)

NOTES/COMMENTS:

Postsecondary Occupational Education
Delivery: An Examination

DIRECTOR OF PLACEMENT INTERVIEW FORM

INTERVIEWER________________________ RESPONDENT________________________

INSTITUTION________________________ TITLE________________________

DATE________________________ TIME: Start________________________
End________________________

CURRICULUM DECISION MAKING

Part of our objective in this study is to understand how institutions make curricular decisions and what factors influence the decision-making process.

1. Where does the placement function fit into the organizational structure of this institution? How much interaction do you have with the administration? With instructional faculty? (PROBE: Assessment, Counseling)

2. How much effective input is there from you or your staff in curriculum decisions? Do you (or other placement staff members) get involved in industry or community needs assessment? Do you interact with instructional faculty in curriculum decision making? (Probe: frequency, nature of interaction)

BUSINESS/INDUSTRY AND OTHER EXTERNAL INTERACTIONS

3. As part of your placement-related role, do you (or your staff) have regular contact with businesses or industries in your community (other than in needs assessment as discussed above)? Please describe those contacts. Of the job listings in your office, what percentage result from your office's initiative? What share are initiated by employers? What best accounts for employer-initiated requests?

4. Do you obtain follow-up information from businesses about graduates who have been placed? Please describe the process.

5. Do you or your staff members conduct employment screening interviews to pre-select job candidates for employers?

6. Do you or your staff work with other education and training institutions as part of your job-related duties (e.g., secondary schools, JTPA agencies, military, 4-year institutions, etc.)? Describe these interactions. How often? Toward what goals?

STUDENT CAREER DEVELOPMENT

7. Are you involved in co-op or workstudy programs for students in any way? Please explain.

8. What types of activities do you or your institution have in place to assist students in identifying their career interests? (e.g., career fairs, plant tours, computer programs)?

9. Are career development programs offered and taught by the placement or counseling staff? (e.g., options for women, employability skills) Please explain.

10. Does your institution have an open enrollment policy? How does the open enrollment policy affect the staff's ability to properly match students interests and abilities to the proper programs? How does it affect your institution's placement rate?

11. What would you estimate to be the percentage of placements for occupational students in areas for which they have been trained? Is this estimate based on systematic data collection? For your institution, what are the major factors affecting this percentage? How does this vary among programs?

PERSONAL AND JOB CHARACTERISTICS

12. What proportion of your time (or your staff's time) is spent counseling students regarding personal or family problems? (vs. occupational guidance or placement activities)

13. Do you (or your staff members) belong to any professional placement-related associations? What types of activities do you engage in to maintain and upgrade your professional expertise? How much institutional support is there for staff development?

14. What aspects of your job do you like the best? The least? What changes would you make if you could?

NOTES/COMMENTS

Postsecondary Occupational Education Delivery:
An Examination

DEPARTMENT CHAIR INTERVIEW FORM

INTERVIEWER ____________________

INSTITUTION ____________________

DATE ____________________

DEPARTMENT/PROGRAM ____________________

CHAIRPERSON'S NAME ____________________
____

TIME: Start ____________________
End ____________________

CURRICULUM DECISION MAKING

A major objective of our study is to understand how institutions make curriculum decisions and what factors influence the decision making process.

1. Are you responsible for the curriculum development and curriculum revision of your department/program? If you received a suggestion for a change (e.g., a group of faculty members suggest dropping a course from the curriculum as no longer being relevant), please describe the steps that would have to be followed to implement such a change. About how long would it take?

2. Do you have an advisory board(s)? What is its (their) composition? How were they selected? What role do they play in the curriculum decision making process (e.g., in defining the content of new courses or altering work-experience activities)?

FACULTY ISSUES

In addition to the issue of curriculum decision making, we are also interested in instructional processes and effectiveness. As a consequence, we would like to ask you several questions about faculty issues.

3. Faculty hiring policies and procedures vary from institution to institution. As the department chair, are you responsible for your department's hiring? Explain and describe the steps necessary to hire a permanent staff member.

4. Do you make use of part-time or adjunct staff? Describe the steps necessary to hire part-time staff. What qualifications do you require for part-time staff? What are the advantages/disadvantages of employing part-time or adjunct staff?

5a. In respect to faculty, are you directly responsible for conducting periodic performance appraisals of your faculty (faculty evaluation)? If yes, describe the evaluation process. (Probe: Importance of professional activities and teaching capability.)

5b. How are faculty salaries determined? What is the starting salary for a permanent staff member? What is the starting salary for part-time instructors? (Observer: the part-time salary may be on a per credit hour or per contact hour basis. Try to get enough information to compare the salary levels of permanent and part-time staff.)

5c. How do your institution and your department support the professional development of faculty?

6. How much influence do you have on the instruction that takes place in classrooms--e.g., methods, equipment, content?

BUSINESS/INDUSTRY AND OTHER EXTERNAL INTERACTIONS

7. As the department chair, do you have regular contact with businesses or industries in your community? Please describe the frequency and nature of those contacts.

8. Do you receive follow-up information from businesses about your department's graduates (or noncompleters) who have been placed? Could you please name 5 businesses that hired your graduates over the past 2-3 years? (Interviewer: Explain that you need to conduct a telephone interview with 2 of them. Obtain contact names and phone numbers.)

	Employers:	Contact	Phone
1.			
2.			
3.			
4.			
5.			

9. Do you work with other educational or training institutions as part of your duties as department chair (e.g., secondary schools, JTPA agencies, military, 4 year institutions, etc.)? Describe the nature and frequency of these interactions.

STUDENTS

10. Does your institution have an open enrollment policy? If so, does the open enrollment policy affect your program--e.g., curriculum, completion rates, etc. How does your program support students who are thought to be "at-risk"--LEP, handicapped, limited basic skill attainment?

11. Does your department have additional admission policies that are above and beyond the institution's admission policies? If so, please describe.

12. What would you estimate to be the percent of student placement into jobs related to training? Is this estimate based on systematic data collection? What factors affect the placement percentage for your program?

13. Is your department involved in co-op or work-study programs for students? Please describe.

FUNDING POLICY/BUDGET

14. What is your involvement in the process of budgeting the department's annual funds? Please explain the institution's funding policy and budget structure.

15. What has been your most valuable contribution to your department?

NOTES/COMMENTS:

Postsecondary Occupational Education Delivery: An Examination

INSTRUCTOR INTERVIEW FORM

INTERVIEWER______________________ INSTRUCTOR______________________

INSTITUTION______________________ PROGRAM/DEPARTMENT__________________

DATE__________________________

TIME: Start_______________
End________________

CURRICULUM AND INSTRUCTIONAL DECISION MAKING

The major emphasis of our study is to understand how institutions make curricular and instructional decisions and what factors influence the decision making process.

1. To what extent do faculty participate in curriculum decisions (establishing a new program/course, modifying a program/course, or ending a program/course)? How much effective faculty input is there?

2. How much input do you have in determining the content, resource materials, texts, etc. for your courses? To what extent does interaction with peers influence these matters?

3. What materials, equipment, instructional techniques, or other program components do you use in your courses that you are most proud of? What resources, if any, do you lack that you feel you need most to improve your courses?

Proud of . . .	Resources needed . . .

4. What techniques do you use to enhance and reinforce your students' basic skills (e.g., reading, writing, speaking, math) in your classes? Explain.

STUDENT CHARACTERISTICS

We recognize that your curriculum and instruction must be tied to student needs and requirements.

5. How well motivated to learn are the students in your classes? On what evidence do you base that perception? Does motivation differ by age, gender, or other characteristics? Have motivation levels changed over the years in your opinion?

6. What kinds of support services are available to you for helping you work with LEP (bilingual), handicapped, students with limited basic skills, and other disadvantaged students? How have you used those services?

7. Do you feel your students are adequately informed about the career opportunities available to them in your community? What do you think should/could be done to improve that situation?

8. Do you include the topic of employability skills (e.g., attitude, job search skills) in any of the courses that you teach?

9. Are you aware of follow-up/follow-through activities related to students who have completed or left your program? Who is responsible for conducting these activities? Do you ever contact employers about students that you had contact with during their enrollment in your program?

JOB CHARACTERISTICS AND JOB SATISFACTION

Finally, we'd like to ask you some questions about how you spend your time on the job and how satisfied you are with your job.

10. About what percentage of your time during a quarter or semester would you estimate that you spend on instructional preparation and delivery? What are the biggest demands on your work time apart from instructional preparation and delivery?

11. As part of your job-related role, do you have regular contact with businesses/industries in your community? Explain.

12. What activities do you undertake to stay current in your field? Does your department/program encourage and facilitate these activities? Why or why not?

13. What aspects do you like the best about your job? What aspects do you like least? What changes would you make if you could?

NOTES/COMMENTS:

Postsecondary Occupational Education Delivery: An Examination

STUDENT INTERVIEW FORM
(Group Interview)

INTERVIEWER ______________________	COURSE ______________________
INSTITUTION ______________________	INSTRUCTOR ____________________
PROGRAM _________________________	NUMBER OF STUDENTS ____________
DATE ____________________________	TIME: Start _________________ End _________________

MOTIVATIONAL FACTORS

One of the major objectives of our study is to understand the factors that motivate students to choose particular courses, majors, and institutions.

1. What major programs are you enrolled in?

Program	Number of Students
______________________	______________
______________________	______________
______________________	______________

2. Why are you taking this particular course? (Probe: Requirement, Personal Interest, Counselor Recommended, Prerequisite, etc.)

3. What are your educational goals? What motivated you to take more schooling after high school?

4. What are your career goals? Why did you choose these goals? What kind of job do you think you'll get when you graduate from this program?

5. What motivated you to attend this institution? Did you consider other institutions? Do you feel that you are getting your money's worth?

6. Did you receive reliable information about the institution prior to your enrollment? From where? Was it accurate? What were some inaccuracies?

7. Were you aware of how much work would be involved to succeed in your classes? Do you feel the work load in your courses is fair?

8. How much information do you have about how many graduates in your major program get placed and where they get placed? How do/did you get this information?

9. To your knowledge, does this school listen to student recommendations about curriculum changes or what courses to offer? Do they follow-up on students who have graduated?

FACTORS AFFECTING STUDENT PROGRESS

10. What are some of the biggest problems you face in attending school? (Probe: Family responsibilities, job responsibilities, subject difficulty, finances, transportation, etc.) Does your current employer know that you are attending school? Does he/she support you with flexible time or other arrangements?

11. Have you ever considered leaving the program you're in? Leaving the institution altogether? Why?

COMMENTS ABOUT THIS COURSE

12. What do you think of this course? Would you recommend it to a friend? Why? or Why not?

Number
________ would recommend
________ would not recommend

13. What do you think of the instructor's style of teaching, emphases, content? (Probe: amount or type of homework, quizzes, tests.)

14. Do you have any specific suggestions for how the course could be improved? Does the instructor ever ask for your opinions regarding such suggestions and listen to them?

NOTES/COMMENTS:

Postsecondary Occupational Education Delivery:
An Examination

EMPLOYER INTERVIEW FORM

INTERVIEWER________________________ RESPONDENT________________________

DATE______________________ TITLE________________________

TIME: Start______________ FIRM________________________
End________________

GENERAL INFORMATION

1. For what types of positions do you hire graduates from occupational programs at (institution name)? Approximately how many of these students did you hire in the last 2 years? In general, what is the starting wage for these positions?

	Positions . . .	Wage . . .
1987? ______		
1986? ______		
1985? ______		

2. How are their students typically recruited? Do you rely on any of the following mechanisms?

-co-op program
-internships
-instructor referrals
-college placement office referrals

OPINION OF THE INSTITUTION

3. How well prepared are individuals from (institution name) for the actual jobs at your firm? (Are there elements of the job that have been overlooked by the curriculum?--elements which are over/underemphasized?)

4. In your opinion, what are the strong points of the instructors at this institution? What are weaknesses that you may be aware of? (Is there an over/underemphasis on theory vs. "hands-on" training?) How well informed are instructors regarding new technologies or methods?

5. Is the equipment used for classroom instruction up-to-date? Is the training equipment comparable to equipment used on-the-job?

6. Do graduates from (institution name) require less on-the-job training than:
   1. graduates from other postsecondary institutions?
   2. employees without occupational program completion? (in comparable jobs)

7. Can you distinguish between (institution name) and non-(institution name) employees in terms of:
    1. productivity?
    2. turnover rates?
    3. promotion rates?

8. Do most graduates have the basic skills that you feel are necessary to make them good employees (i.e., reading, writing, arithmetic, communication and personal skills)? Does (Institution name) work to develop and improve student's basic skills?

9. Do most graduates seem to have good work habits? Does (institution name) work to develop employability skills and attitudes?

LINKAGE WITH POSTSECONDARY INSTITUTION

10. Is there anyone from this organization serving on an advisory committee at (institution name)? If yes, how are they involved in curriculum decision making?

11. Are the training needs of your firm communicated to (institution name)? How?

12. Does anyone from (institution name) systematically follow-up with you about their graduate's job performance? If so, briefly describe.

13. Have instructors visited your organization to gain a better understanding of your operation and needs? Do key people from your organization act as guest lecturers for classroom instruction?

14. In your opinion, what changes or improvements would you suggest to (program) at (institution name)?

Postsecondary Occupational Education Delivery:
An Examination

CLASSROOM OBSERVATION FORM

About the observation:

Observer: __________

Date: __________

Time: __________ a.m. p.m.

About the class:

Total # Students ______

Gender: Male ______

Female ______

Age: < 21 ______

21-25 ______

26+ ______

Ethnic: Black ______

Hispanic ______

White ______

Other ______

Educ. < High school graduate ______

High school graduate, no prior postsec ______

Some prior postsec ______

LEP: ______

Handicapped: ______

Econ. Disad: ______

About the course:

Institution: __________

Department: __________

Name of Course: __________

Instructor(s): __________

____

Meetings/week ______ Hours/week ______

About today's instructional plans:

Objective: __________

____

____

____

Method(s): __________

____

____

Planned Student Activities: __________

____

____

How many times have you presented this material today (or very recently)?

______ times

Approximately how many times prior to this grading period? ______ times

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Observation Period No. I (First 15 minutes)

I-1. What is the nature of instruction? (Method, delivery, equipment, materials)

I-2. What is the nature of the response? (Student activity, enthusiasm, time on task, questions, student interaction)

I-3. Feedback events?

I-4. Observer evaluation.

Mini-episode No. 1 (at 15 minutes)

1.1 Person in charge of instruction **(Check one)**

_____ Teacher _____ Aide _____ Student _____ Other

1.2 Method of instruction **(Check one)**

_____ No instruction taking place *****(Go to 1.3)*****

_____ Lecture
_____ A/V
_____ Student practice/performance
_____ Demonstration

_____ Individualized instruction
_____ Other ____________________
____
____

*****(Go to 1.4)*****

1.3 No instruction is taking place. What is happening?

Students... **(Check one)**

_____ Test
_____ Set up/Clean up
_____ Other activities __________
____
____

Instructor... **(Check any that apply)**

_____ Not present
_____ Conducting an examination
_____ Engaged in instruction-related activity; describe: __________
____
_____ Engaged in unrelated activity; describe: __________
____

1.4 Attention of students **(Check any that apply)**

_____ All students paying attention
_____ Most students paying attention
_____ About half the students paying attention
_____ Few students paying attention
_____ No one seems to be paying attention

_____ One or a few students much more attentive than the rest
_____ One or a few students much less attentive (talking, sleeping, doing nothing)

_____ Learning activities did not require students to pay attention to instructor

1.5 Are students engaged in practice or performance?

_____ No *****(Go to 1.7)*****
_____ Yes

Comments/Clarifications:

1.6 Student application of skills **(Check any that apply)**

_____ Students applied themselves to the fullest extent possible; no wasted time
_____ Students generally applied themselves to their assigned task(s)
_____ Students moderately on task
_____ Students generally were not applying themselves
_____ No one seemed to be on task

_____ One or a few students were making much better use of activity than the rest of the class
_____ One or a few students were making much less use of the activity than the rest of the class

1.7 Is instructor asking questions or otherwise soliciting a response from students?
_____ No *****(Go to 1.11)*****
_____ Yes

		Low						High
1.8	a) To what extent were questions used?	1	2	3	4	5	6	7
	b) To what extent did students respond to questions?	1	2	3	4	5	6	7

1.9 What portion of the students answered the instructor's questions or volunteered answers **(Check one)?**

_____ All of the class
_____ Most of the class
_____ Half of the class
_____ Quarter of the class
_____ One or a few students
_____ None

1.10 Did the instructor use feedback to **(Check any that apply)**--

_____ Correct or amend the student's responses
_____ Clarify the subject matter or question
_____ Ask follow-up questions
_____ Reward student for participation

_____ Criticize or discredit students' responses
_____ Criticize a student's behavior

_____ Other ______________________________________
____

1.11 Is instructional activity individualized and self-paced?

_____ No **(Mini-episode is finished. Comments/clarifications below)**
_____ Yes

1.12 How autonomously are the students working?

Little						Complete
1	2	3	4	5	6	7

Comments/Clarifications:

Observation Period No. II (15 - 30 minutes)

II-1. What is the nature of instruction? (Method, delivery, equipment, materials)

II-2. What is the nature of the response? (Student activity, enthusiasm, time on task, questions, student interaction)

II-3. Feedback events?

II-4. Observer evaluation.

Mini-episode No. 2 (at 30 minutes)

2.1 Person in charge of instruction **(Check one)**

_____ Teacher _____ Aide _____ Student _____ Other

2.2 Method of instruction **(Check one)**

_____ No instruction taking place *****(Go to 2.3)*****

_____ Lecture
_____ A/V
_____ Student practice/performance
_____ Demonstration

_____ Individualized instruction
_____ Other ____________________
____
____

*****(Go to 2.4)*****

2.3 No instruction is taking place. What is happening?

Students... **(Check one)**

_____ Test
_____ Set up/Clean up
_____ Other activities _________
____
____

Instructor... **(Check any that apply)**

_____ Not present
_____ Conducting an examination
_____ Engaged in instruction-related activity; describe: ___________
____

_____ Engaged in unrelated activity; describe: ____________________
____

2.4 Attention of students **(Check any that apply)**

_____ All students paying attention
_____ Most students paying attention
_____ About half the students paying attention
_____ Few students paying attention
_____ No one seems to be paying attention

_____ One or a few students much more attentive than the rest
_____ One or a few students much less attentive (talking, sleeping, doing nothing)

_____ Learning activities did not require students to pay attention to instructor

2.5 Are students engaged in practice or performance?

_____ No *****(Go to 2.7)*****
_____ Yes

Comments/Clarifications:

2.6 Student application of skills **(Check any that apply)**

_____ Students applied themselves to the fullest extent possible; no wasted time
_____ Students generally applied themselves to their assigned task(s)
_____ Students moderately on task
_____ Students generally were not applying themselves
_____ No one seemed to be on task

_____ One or a few students were making much better use of activity than the rest of the class
_____ One or a few students were making much less use of the activity than the rest of the class

2.7 Is instructor asking questions or otherwise soliciting a response from students?
_____ No *****(Go to 2.11)*****
_____ Yes

	Low						High
2.8 a) To what extent were questions used?	1	2	3	4	5	6	7
b) To what extent did students respond to questions	1	2	3	4	5	6	7

2.9 What portion of the students answered the instructor's questions or volunteered answers **(Check one)**?

_____ All of the class
_____ Most of the class
_____ Half of the class
_____ Quarter of the class
_____ One or a few students
_____ None

2.10 Did the instructor use feedback to **(Check any that apply)**--

_____ Correct or amend the student's responses
_____ Clarify the subject matter or question
_____ Ask follow-up questions
_____ Reward student for participation

_____ Criticize or discredit students' responses
_____ Criticize a student's behavior

_____ Other ____
____

2.11 Is instructional activity individualized and self-paced?

_____ No **(Mini-episode is finished. Comments/clarifications below)**
_____ Yes

2.12 How autonomously are the students working?

Little						Complete
1	2	3	4	5	6	7

Comments/Clarifications:

Observation Period No. III (30 - 45 minutes)

III-1. What is the nature of instruction? (Method, delivery, equipment, materials)

III-2. What is the nature of the response? (Student activity, enthusiasm, time on task, questions, student interaction)

III-3. Feedback events?

III-4. Observer evaluation.

Mini-episode No. 3 (at 45 minutes)

3.1 Person in charge of instruction **(Check one)**

_____ Teacher _____ Aide _____ Student _____ Other

3.2 Method of instruction **(Check one)**

_____ No instruction taking place *****(Go to 3.3)*****

_____ Lecture
_____ A/V
_____ Student practice/performance
_____ Demonstration

_____ Individualized instruction
_____ Other ____________________
____
____

*****(Go to 3.4)*****

3.3 No instruction is taking place. What is happening?

Students... **(Check one)**

_____ Test
_____ Set up/Clean up
_____ Other activities _________
____
____

Instructor... **(Check any that apply)**

_____ Not present
_____ Conducting an examination
_____ Engaged in instruction-related activity; describe: ____________
____
_____ Engaged in unrelated activity; describe: ____________________
____

3.4 Attention of students **(Check any that apply)**

_____ All students paying attention
_____ Most students paying attention
_____ About half the students paying attention
_____ Few students paying attention
_____ No one seems to be paying attention

_____ One or a few students much more attentive than the rest
_____ One or a few students much less attentive (talking, sleeping, doing nothing)

_____ Learning activities did not require students to pay attention to instructor

3.5 Are students engaged in practice or performance?

_____ No *****(Go to 3.7)*****
_____ Yes

Comments/Clarifications:

3.6 Student application of skills **(Check any that apply)**

_____ Students applied themselves to the fullest extent possible; no wasted time.
_____ Students generally applied themselves to their assigned task(s)
_____ Students moderately on task.
_____ Students generally were not applying themselves
_____ No one seemed to be on task

_____ One or a few students were making much better use of activity than the rest of the class.
_____ One or a few students were making much less use of the activity than the rest of the class.

3.7 Is instructor asking questions or otherwise soliciting a response from students?

_____ No ***(Go to 3.11)***
_____ Yes

		Low						High
3.8	a) To what extent were questions used?	1	2	3	4	5	6	7
	b) To what extent did students respond to questions?	1	2	3	4	5	6	7

3.9 What portion of the students answered the instructor's questions or volunteered answers **(Check one)**?

_____ All of the class
_____ Most of the class
_____ Half of the class
_____ Quarter of the class
_____ One or a few students
_____ None

3.10 Did the instructor use feedback to **(Check any that apply)**--

_____ Correct or amend the student's responses
_____ Clarify the subject matter or question
_____ Ask follow-up questions
_____ Reward student for participation

_____ Criticize or discredit students' responses
_____ Criticize a student's behavior

_____ Other ____
____

3.11 Is instructional activity individualized and self-paced?

_____ No **(Mini-episode is finished. Comments/clarifications below)**
_____ Yes

3.12 How autonomously are the students working?

Little						Complete
1	2	3	4	5	6	7

Comments/Clarifications:

Post-Observation Summary

1. Did instruction begin in a timely manner?

_____ Yes
_____ No Explain why not ______________________________
____
____

2. Rate the following contextual elements:

	Poor; Unsatisfactory	Inadequacies Present	Satisfactory	Superior; Outstanding
a) Printed materials **COMMENTS:**	1	2	3	4
b) Training and audio/visual aids **COMMENTS:**	1	2	3	4
c) Tools, machines and job related equipment **COMMENTS:**	1	2	3	4
d) Physical conditions of room/area (e.g., lighting, heating, ventilation, size) **COMMENTS:**	1	2	3	4
e) Sound conditions **COMMENTS:**	1	2	3	4

3. Did students work in groups?

_____ No *****(Go to 5)*****
_____ Yes

4. What was the apparent purpose of the grouping? (e.g., equipment sharing, group projects, group competing against each other)

5. What percentage of observed class time was devoted to instruction, practice, or other activities?

_____ % Instruction
_____ % Practice
_____ % Other-task-related. Explain _______________________________
____
_____ % Other-off task Explain _______________________________
____

100%

6. These statements about procedure, activity, and content in the classroom are to be rated by the observer in terms of overall lesson outcome on day observed. The observer should respond by choosing a number for each statement from 1 (strongly agree) to 7 (strongly disagree), or 0 (couldn't tell).

		AGREE					DISAGREE		
a)	Teacher showed evidence of following a lesson plan.	1	2	3	4	5	6	7	0
b)	Instructional materials were well prepared.	1	2	3	4	5	6	7	0
c)	Instruction was presented at a rate that was neither too fast or too slow.	1	2	3	4	5	6	7	0
d)	Teacher appeared very competent in subject matter.	1	2	3	4	5	6	7	0
e)	An adequate supply of materials was available for students.	1	2	3	4	5	6	7	0
f)	Student time was used effectively.	1	2	3	4	5	6	7	0
g)	Grades are important to students in this class.	1	2	3	4	5	6	7	0
h)	Teacher maintained instructional focus.	1	2	3	4	5	6	7	0
i)	Students really enjoyed this class.	1	2	3	4	5	6	7	0
j)	Students supported each other during this class.	1	2	3	4	5	6	7	0
k)	Teacher motivated students.	1	2	3	4	5	6	7	0
l)	Students put a lot of energy into what they did in class.	1	2	3	4	5	6	7	0
m)	There was a clear set of expectations for students to follow.	1	2	3	4	5	6	7	0

n)	Teacher seemed more like a friend than an authority.	1	2	3	4	5	6	7	0
o)	Teacher went out of his/her way to help students.	1	2	3	4	5	6	7	0
p)	Getting a certain amount of class work done was very important to this class.	1	2	3	4	5	6	7	0
q)	Students took part in class discussions.	1	2	3	4	5	6	7	0
r)	Students took notes.	1	2	3	4	5	6	7	0
s)	Teacher used a variety of instructional strategies.	1	2	3	4	5	6	7	0

7. What was unique and/or promising about the teacher, instructional content, or student activities?

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